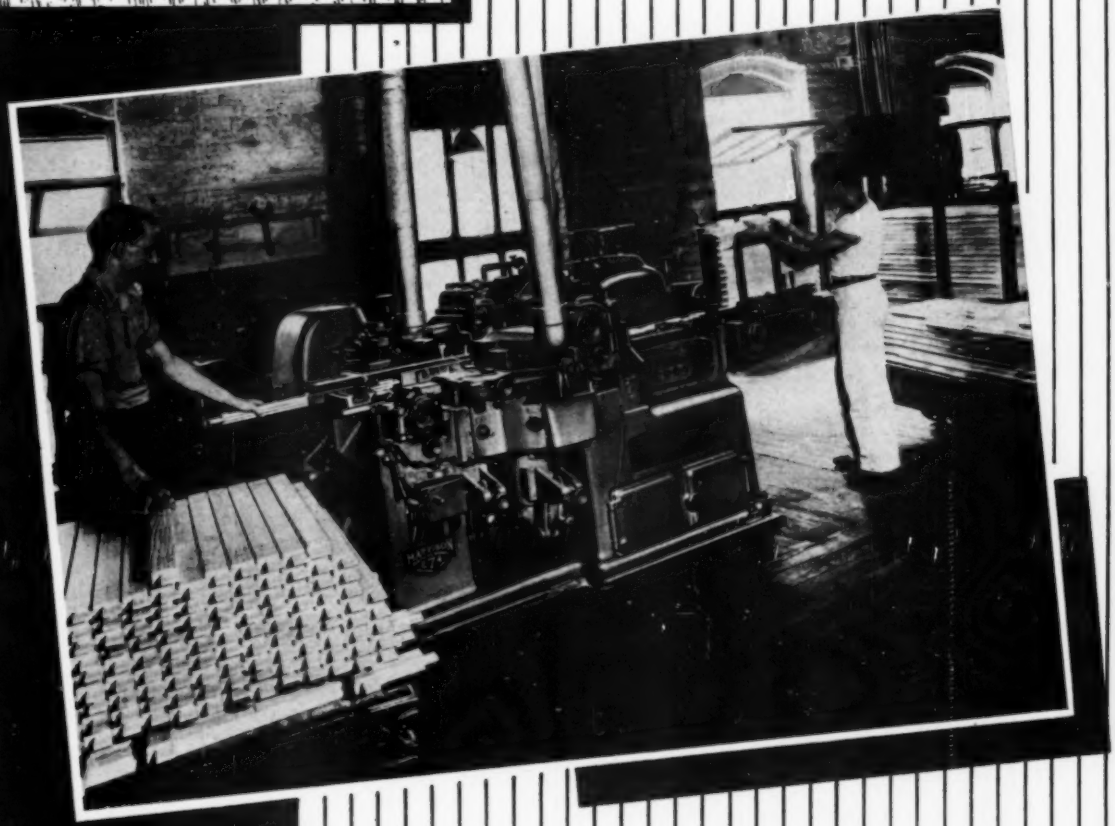
July 1949

WOOD PRODUCTS



○ Sup't ○ Purch. Agent ○ Machine Foreman ○ Cabinet Foreman ○ Finishing Foreman

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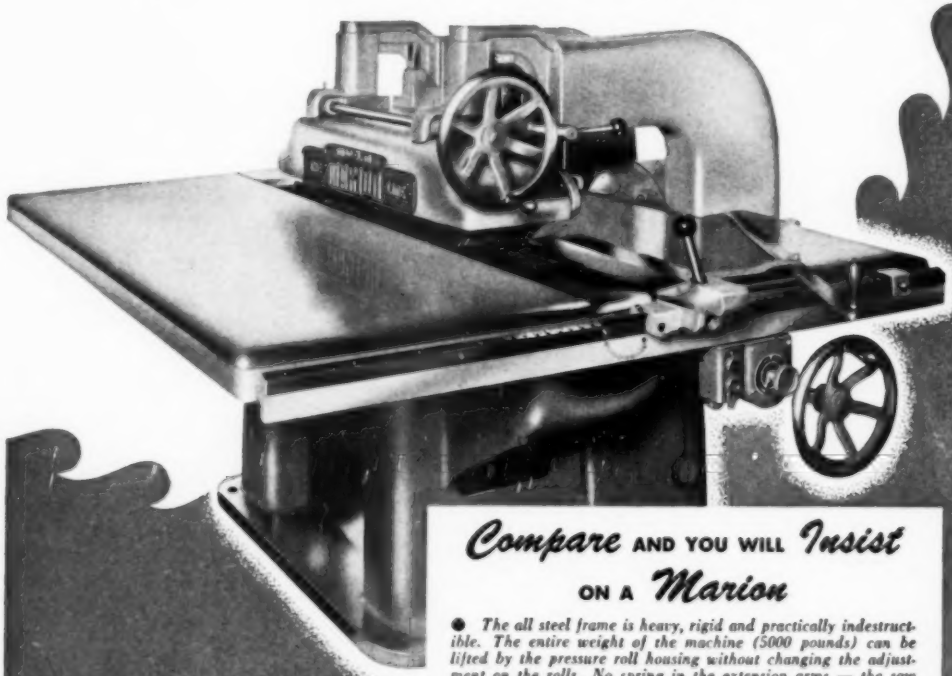
MARION MODEL M RIP SAW

. . . is Good Enough!

● Marion Model M is a precision rip saw of advanced design to meet today's demand for cost-cutting equipment. Claims of Leadership should be proven; so-called "Originals" are outdated by this fast, newly designed, modern straight line glue joint rip saw of the undercutting type. The Marion Model M's performance in ripping to close parallel tolerances cannot be duplicated because it is the only *straight line glue joint rip saw* whose design is based on the belief that THERE IS NO SUBSTITUTE FOR CARRYING THE STOCK PAST THE SAW BLADE IN A STRAIGHT LINE to obtain a straight joint! Standard speed range from 56 to 212 feet per minute.



Compare AND YOU WILL *Insist* ON A *Marion*

● *The all steel frame is heavy, rigid and practically indestructible. The entire weight of the machine (5000 pounds) can be lifted by the pressure roll housing without changing the adjustment on the rolls. No spring in the extension arms — the saw will cut vertical on all stock of whatever thickness.*

● *The adjustment for straight or hollow joints is Positive and Permanent. It will not change or wear out of adjustment. Stock will follow the gauge perfectly regardless of width or thickness.*

● *No sawdust accumulation inside. Machine cannot be started while operator is changing saws. Automatic lubrication.*

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DEPT. WP MARION, INDIANA, U. S. A.

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Furniture Semi-Dimension
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Millwork Cut Stock

Yard, Factory & Industrial
Lumber
in
Red & White Oak - Red, Black & Sap Gum
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Other Commercial Species

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DRYING

CROSSETT LUMBER COMPANY CROSSETT ARKANSAS

Typical of THE MEN WHO MAKE INDUSTRIAL MAINE

Truman Pease says:

"You hear a lot of talk about the attractions and glamour of working in big cities. Over the years, I have seen many of my friends pull up stakes and try their luck at city life. Then, later, I have seen these same fellows come back to Maine and heard them say: 'Boy, it's good to get back here and really live again!'

"I've come to the conclusion that there is no substitute for the happiness and contentment you get in living and working in a place you like. Yes, I'm glad I stayed in Maine.

"Take my work in the woolen mill. I have worked here for fourteen years and have thoroughly enjoyed it. I get real downright pleasure in seeing fine woolen cloth come from the mill and I take a great deal of pride in the part I do.

"I wouldn't trade my life in Maine for all the bright lights of the city. I have a 200 acre farm, keep a small herd of good cows and cut some wood on the side. Take it from me, Maine is a grand place in which to live, work and play."

Truman M Pease

Truman Pease is typical of thousands of Maine workers who take pride in their work and really enjoy life. Maine has what your industry needs. Nearness to the nation's biggest markets; year 'round production weather; moderately priced power; pure processing water; excellent transportation; fair taxes; no State sales tax; no State income tax.

If you are planning to move, expand or decentralize, it will pay you to investigate the industrial advantages of Maine. Write for free booklet, "Industrial Maine".

STATE OF MAINE WOOD PRODUCTS INDUSTRY

MAINE DEVELOPMENT COMMISSION, 875 STATE HOUSE, AUGUSTA, MAINE

WOOD PRODUCTS

ABC

431 S. Dearborn St., Chicago 5, Illinois

Vol. 54 JULY, 1949 No. 7

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PLASKON
Resin Glue Guide
INSTRUCTIONS
Set total weight of glue mix on Scale B under total cost of mix on Scale A.
Read cost per 1000 sq. ft. of single glue line on Scale D under spread pounds of liquid glue mix per 1000 sq. ft. on Scale C
GLUE MIX MADE WITH:
WEIGHT
COST
Lbs. of Glue
Lbs. of Flour
Lbs. of Hardener
Lbs. of Water for Glue
Lbs. of Water for Flour
X Price/Lb. =
X Price/Lb. =
X Price/Lb. =
TOTAL WEIGHT OF MIX SCALE B
TOTAL COST OF MIX SCALE A
Use pencil for figuring weights and costs in spaces above.
COST OF MIX
WEIGHT OF MIX
SPREAD
COST PER 1000 SQ. FT.
C
D
PLASKON DIVISION, LIBBEY-OWENS-FORD GLASS COMPANY, TOLEDO 6, OHIO

Offered to you—

for your convenience— this valuable new Plaskon Resin Glue Guide

Here's a brand new pocket-size guide to make your resin glue figuring easy—and it's yours for the asking! This simple Plaskon Slide Rule will help you:

- Select proper glues. • Determine mixing formulas.
- Compute the cost per 1000 square feet of single glue line.
- Figure correct times, temperatures and thicknesses for hot pressing resin glues.
- Secure formula for determining pressure on plywood.

Plaskon has a complete range of hot and cold press resin glues available in powdered form. High uniformity...good stability in storage. Easy to mix. Non-staining... non-bleeding. *Prompt delivery!*

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World's Largest Manufacturers of Urea Resin Glues • Also Producers of Molding Compounds and Coating Resins

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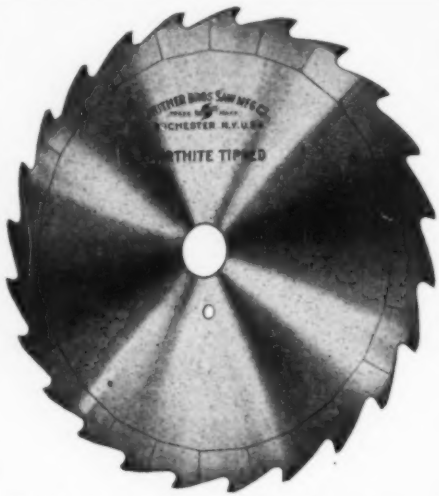

FIRTHITE TIPPED SAW

INSERTED TYPE FOR **WOOD**

Write for full information.

These saws are especially desirable for use on continuous feed machines where smooth cuts are required, and where hard woods are used.

HUTHER BROS. SAW MFG. CO.

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New

CROSS COUNTRY FIREPROOFING SERVICE

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Now you can ship via St. Louis at *through rates* with a short stop-over for Protexol*-treatment. Your lumber is made fire—rot—and vermin-resistant at new low cost under the treat-in-transit rates newly effective in St. Louis.

***low cost* 1 stop service**

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*Listed by Underwriter's Laboratories

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FLOORING

HANDLES & DOWELS

Your Inquiries Invited

ANDERSON-TULLY COMPANY

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Wood
You believe it?

About 1,200 gross of pencils can be made from the average *tree*. Tennessee cedar supplied the world with its pencil wood for 100 years.

?

In 1925, the annual new growth in American forests was estimated at 8.9 billion cubic feet; in 1944, at 13 billion cubic feet a year.

?

Engineers have never been able to duplicate nature's feat of erecting a single column of *wood* weighing up to 200 tons and reaching as high as 300 feet without guy wires or support other than a comparatively limited root system.

?

A great majority of the sounding boards used by larger piano makers are made from Sitka spruce which grows extensively in the Coast region of Oregon and Washington. These sounding boards must be perfectly matched for uniform grain to assure perfect resonant quality.

?

The forest industry of the Pacific Northwest provides 60% of the payrolls of that region.

?

State, county and federal governments own 60% of all the merchantable *timber* and 51% of the forest land of the Douglas fir region.

?

In the United States today far more trees are being grown than have ever been grown before. For the first time in forest history the growth of *trees* of all sizes nearly equals the withdrawal of *trees* by fire, insects, disease and wind plus those harvested by man.

?

The percentage of caskets made from *wood* greatly exceeds that of any other material. In 1945 99.4% of all caskets made were manufactured from wood.

?

In 1940 the State of California led all others in the use of *wood* in manufacture, being followed by Washington, Oregon, Pennsylvania, New York, Illinois, Wisconsin and Tennessee in that order.

?

Sixty per cent of the saw *timber* in the United States is privately owned. Forty per cent is publicly owned.

?

The United States now has more than 2,000 professional foresters at work in private *forest* industries, double the number employed in 1940.

1. SAVE you hours of time and trouble in trial-and-error experimentation with adhesives. These new powders adapt themselves to *your* process—hot press bonding, radio frequency bonding, cold bonding of plywood and furniture.

2. GIVE you dependable bonds, uniform strength, excellent service durability, good water resistance.

3. ELIMINATE dust nuisance; simplify handling, measuring and mixing.

4. SHORTEN pressing schedules; speed production; provide fast "snap" in the hot press; cut pressing schedules without reducing bond quality.

5. CUT costs because of their compatibility with such extenders as wheat flour; permit you to use economical extended mixes for bonds with good water resistance and strength, at lower cost.

6. ASSURE uniform pot life, good spreadability, ease of handling.

7. SOLVE instability problems; have a useful life of a year or longer when stored in a cool dry place.

Finally—UFORMITE 505 and UFORMITE CB-553 give you better bonding in shorter time at lower costs. For proof, send today for full details and samples for testing. We'll be glad to discuss the advantages of these improved urea-formaldehyde resins in your specific application.

OTHER ROHM & HAAS ADHESIVES OF PROVEN SUPERIORITY

TEGO Resin Film—A phenolic, hot press adhesive for boil-proof bonds of proven durability. Especially adapted to thin and fragile veneers.

AMBERLITE PR-14—A stable, powdered phenolic adhesive for hot press plywood and bag molding.

AMBERLITE PR-115—An unmodified resorcinol type, room-temperature-setting adhesive for room or moderate-temperature bonding where durability is essential.

UFORMITE 430, 500—Liquid and powder urea-formaldehyde resins for high bond strength and short pressing schedules.

UFORMITE 501—Pre-catalyzed powder urea-formaldehyde resin for hot pressing—unusual in flour-extension capacity.

UFORMITE CB-552—Pre-catalyzed urea-formaldehyde adhesive for cold bonding and assembly gluing.

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ROHM & HAAS COMPANY

THE RESINOUS PRODUCTS DIVISION

Washington Square Philadelphia 5, Pa.

The Resinous Products Division was formerly The Resinous Products & Chemical Company

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BRADLEY BRAND

Kiln dried
Furniture Dimension

SOLID and GLUED
CUT TO SIZE
RUN TO DETAIL

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Southern Hardwoods

IN ALL
COMMERCIAL SPECIES

•

BRADLEY STANDARDS
PROTECT THE QUALITY
OF *YOUR* PRODUCT

•

Representatives from Coast to Coast

BRADLEY LUMBER COMPANY *of Arkansas*

WARREN, ARKANSAS

Question & Comment

Scale Models for Woodworking Machines

749-1
Editor Wood Products:

Could you supply us with the names and addresses of manufacturers making scale models for wood working machines? These models are for use in making a plant layout.

Very truly yours,
F. Q.

It *Is* Hard to Believe

749-2
Editor Wood Products:

We find in your "Wood you believe it" column of the May issue, a statement of a log containing 200 lbs. of water per one lb. of wood.

Our concensus of opinion is that we don't believe it, but we have one of our members who is the conservative type—he merely wants proof.

Enclosed please find stamped return envelope, in which we are sure you will be able to give us the name of some exotic tree specie, which will make our conservative member happy and the rest of us forced to "believe it."

Yours very truly,
R. L. C.

749-3

Hard to Know *What* to Believe

Editor Wood Products:

Do not know who in your organization is responsible for the enlightening "Wood You Believe It?" column in Wood Products, but the May issue is unusually informative.

What with "Pop," (in corn) lifeless for ten years, then being confined with a block of wood soaked in a common salt solution and being thoroughly revitalized—shades of Ponce de Leon—Then along with this *sure* elixir of life comes the contradiction of *our* timeless heritage, that Eve was not created from Adam's spare rib, but from the Elm.

Recognizing woman's vagaries and capricious contrariness, undoubtedly the Norsemen meant Slippery Elm—and maybe they had something at that—or is this too, just "another old rib."

Yours truly,
W. Mfg. Co.

Equipment for Making Bowling Pins

749-4
Editor Wood Products:

We are sending you under separate cover a sample of a trophy bowling pin. We have a customer who is interested in purchasing equipment for turning these out. They are using discarded bowling pins from which to make these, and, although they will not be turning them out in great quantities, they do anticipate turning out quite a number of them and would like to make information on the proper type of equipment to use on this job.

You have been referred to us as a possible source of equipment for this type of work. Any help you can give us will be very much appreciated.

Yours very truly,
I. S. Co.

—it takes a heap of experience

JAMESTOWN
HOT PRESSED RESIN BONDED
PLYWOOD

Francis H. Isaacson
with JV&P since Dec 1, 1929
Over 19 years

"Ask the Men who know Plywood Best"

Experience trained executives and shop personnel combine to give you up-to-the-minute advice on hardwood plywood.

Immediately available to you after a long period of research and testing are:

- Door panels for BIRCH FLUSH DOORS.
- 3/4" 5 ply BIRCH or OAK on fir—a substitute for lumber core plywood.
- A substantial non-warping BIRCH kitchen cabinet door.

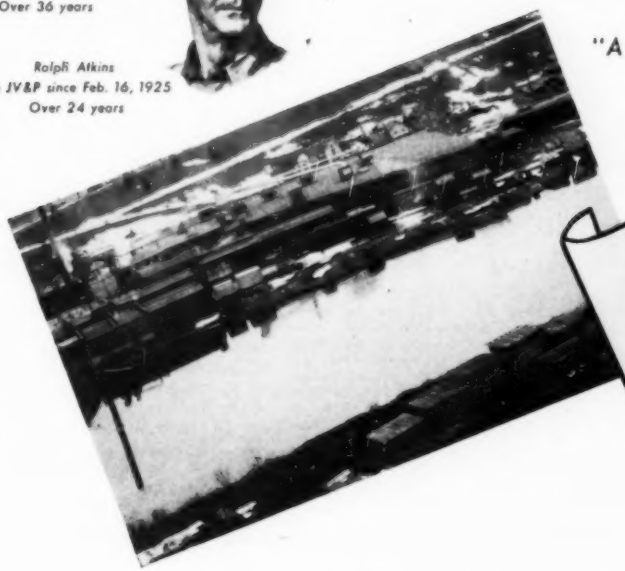
Also available, of course, are the complete lines of JAMESTOWN hardwood plywood and ADIRONDACK MOUNTAIN BIRCH plywood.

John E. Johnson
with JV&P since Dec. 1, 1912
Over 36 years

Ralph Atkins
with JV&P since Feb. 16, 1925
Over 24 years

JAMESTOWN VENEER and PLYWOOD Corp.
JAMESTOWN 2, N. Y.

"A trifle higher in price but much less expensive"



Call . . .
JAMESTOWN
7-134

Just what is Free Enterprise?

It has nothing to do with politics nor wealth nor class. It is a *way of living* in which *you* as an *individual* are *important*. Little things make up this way of living, but think what you would lose if you ever surrendered it:

Free Enterprise is the right to open a gas station or grocery store or buy a farm, if you want to be your own boss, or change your job if you don't like the man you work for. (Under communism you work where you're told, and you live and die bossed by hard-fisted bureaucrats who tell you every move you dare make.)

Free Enterprise is the right to lock your door at night. (In communist countries the dread secret police can break it down any time they like.)

Free Enterprise is the right to argue. (In communist countries you humbly say "Yes" to whatever is told you.)

Free Enterprise is the right to save money if you want, or blow it on a good time if that's what you prefer. (Under communisim you'd never have the money to do either – back-breaking hours earn you only enough to keep alive.)

Free Enterprise is looking on a policeman as someone to protect you, on a judge as a friend to help you. (In communist countries you had better be afraid of all police . . . and dread all judges and courts.)

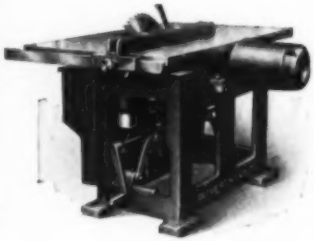
Free Enterprise is the right to raise your children as you think best. (Under communism the state decides what your child shall learn and do, where he or she shall go. Respect for parents, and family life, are held in contempt.)

Free Enterprise is the right to speak freely about anything you wish. (In communist countries you can never know whether your best friend or your own child is an informer. You are told what opinions to have; you'd better not voice any others.)

Free enterprise has nothing to do with how much money you have or don't have, nor what your job is or is not. Free enterprise means the right to *be yourself* instead of some nameless number in a horde bossed by a few despots. Free enterprise is the sum of many litte things – but how miserable you'd be if someone stole it from you!

OLIVER

"Oliver" No. 45 Handfeed Rip Saw



sturdy and powerful . . . for heavy ripping as well as general work

The "Oliver" No. 45 Rip Saw is widely used throughout the woodworking industry for smooth, accurate ripping of light and heavy stock. Handles one-inch boards, planks and timbers. Takes saw up to 26-inch diameter. Furnished with 10 h-p. motor-on-arbor drive, or with 15 h-p. motor coupled to arbor. Also furnished with V-belt drive. A 26-inch saw rips stock up to 9 inches thick, and up to 26½ inches wide. Table measures 35½x56 inches; has 5½-inch vertical adjustment. The safety features are unmatched. Get all the facts on this "Oliver" Rip Saw . . . write for Bulletin No. 45.

OLIVER MACHINERY COMPANY
GRAND RAPIDS 2, MICHIGAN

The first 100 years are the hard test

During our century of experience, we've been proved on practically every type of fastening problem. Today, every fastening we make . . . every customer we have . . . benefits from this accrued experience. When you order Blake & Johnson fastenings, you *know* that a hundred years of know-how have gone to make those fastenings the best your money can buy.

Tapping screws in all sizes, heads and finishes, standard and special, have recently been added to round out our fastening line —to make Blake & Johnson a "one-stop" source for all your fastening needs.

BLAKE & JOHNSON *Fastenings*

Slotted or Phillips head machine screws, wood screws, stove bolts, tapping screws, special headed products; nuts, rivets, chaplets, wire forms, screw machine products . . . in steel, stainless steel, copper, brass, bronze, everdur, nickel, nickel silver, monel, aluminum . . .

1849—1949
A CENTURY OF MANUFACTURING FASTENINGS FOR ALL INDUSTRY

THE BLAKE & JOHNSON COMPANY
WATERVILLE 48, CONNECTICUT

Please send me your new catalog containing full data on the complete line of Blake & Johnson fastenings.

NAME

TITLE

COMPANY

ADDRESS

W-1

8 Features you'll like on this WHITNEY No. 177 *Variety* SAW

- SAW TILTS TO 45°
- CUTS STOCK 4" THICK
- RIPS UP TO 29½" WIDE
- TAKES DADO HEADS UP TO 3" WIDE
- EASY READING GAGES
- 5-POSITION RIP GAGE WITH RACK AND PINION ADJUSTMENT
- BUILT-IN SCALE IN TABLE, AT RIGHT OF SAW
- TOTALLY ENCLOSED, FAN-COOLED MOTOR ON SAW ARBOR

Here's a Variety Saw that meets all the requirements for accuracy, dependability and low cost sawing whether on straight production runs or handling the variety of accurate sawing required in the average woodwork shop. A precision-built, rugged saw for heavy or light cuts, quick set-ups, quick change-overs, convenient operation and low upkeep cost.

Write or wire for full information.

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PLANERS • SHAPERS • AUTOMATIC SHAPERS • VARIETY SAWS
MORTISERS • BACK KNIFE LATHES • WOOD SCRAPING MACHINES

WOOD PRODUCTS

NATIONAL MAGAZINE OF THE WOOD PRODUCTS INDUSTRY

431 S. DEARBORN STREET, CHICAGO 5, ILLINOIS

Vol. 54—No. 7 JULY, 1949 25c a Copy, $2 a Year

The Editor's Viewpoint

Advertising Now A Bargain

Firms who are sharpening up their sales programs in order to get their share of the customers dollar can feel pleased that advertising costs are a real bargain.

Contrary to general impressions, advertising costs are a unique exception to the upward trend in prices.

The cost today to reach 1,000 or a 1,000,000 people through advertising is about the same as it was in 1940.

The rate per page per thousand circulation of 29 major magazines in 1948 was $3.57 compared with the same cost of $3.57 in 1940.

The milline rate of 1,781 daily and 511 Sunday newspapers in 1948 was $2.77 compared with $2.68 in 1940 (a rise of only 3%).

The cost per thousand radio homes covered by two major networks is lower now than in 1940.

Important Marketing Factors

The U. S. population has grown by over 16 million from 131,669,275 in 1940 to 148,000,000 now or an increase of over 12%. About 7 million people have moved from rural areas to cities where the pattern and standard of living are quite different. By 1950 the farm population will have decreased by about three million from 1940 while the non-farm population will have increased by 21 million. The abnormally high birth rate since 1940 resulted in about 29 million births which soon will have an important influence on school facilities, housing requirements, and food requirements. Some 16 million marriages since 1940 have brought new families into existence, representing well over one-third of all our families and the educational level of our adults is now considerably higher than in 1940. All of these are factors that point to increased market potentials.

Furniture Shows Encouraging

As the first half of the two-week Chicago furniture market drew to a close, the general impression among buyers and sellers was that it was considerably better than had been anticipated. Buyers were exercising caution in placing quantity orders but were placing sample orders generously.

Many manufacturers had the buyers fairly drooling over their new offerings which had been restyled and alluringly priced. With dealers stocks depleted and their summer sales clicking, it is fair to assume that the present show will be far from a failure and that with the Housing bill going through, plus retention of the Taft-Hartley act, fall activity among furniture plants will be gratifyingly brisk.

(American Type Founders, Inc.)

MOULDED PLYWOOD

ADDS THE MAGIC TOUCH TO *Mass Production*

Functional Furniture Manufacturers produced this dinette set from stock molded plywood parts. The compass leg chairs were designed by Allan Gould.

Since the technique in the production of veneers was perfected to the point where they could be accurately fabricated in mass quantities, modern plywood has made enormous strides as an important material in furniture manufacturing.

*The material in this article, and the illustrations, are the courtesy of Laminated Veneers, Incorporated.

Urea and phenol resin glues are used in coating the veneers on this roller coating machine. These synthetic resin adhesives promote bonds that are waterproof, strong and permanent.

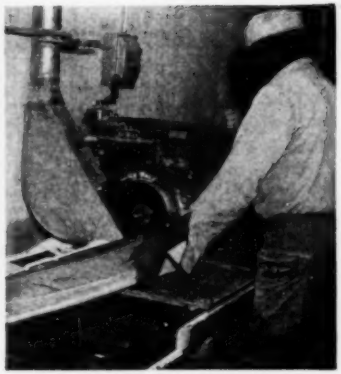
Most modern plywood is made from veneers produced by the rotary cutting method. These veneers are molded in curved forms, and are bonded with synthetic resins under a combination of high pressures and temperatures. The result of this processing is veneers which resolve themselves into rigid forms, veneers extremely resistant to any denting or bending. It is the unusual physical properties of this "molded wood" which lead to wide application in the furniture industry.

As we know, plywood is the end result of a method which converts natural wood or timber into an easily useable sheet material. Technical manuals define "plywood" as "laminated wood consisting of an odd number of plies, with the grain of the alternate layers at right angles to one another." A most important advantage of this material is that it is possible to fabricate thin pieces which possess equal strength both with the grain and cross-grain. Obviously, since plywood is a synthetic material it is weaker in the direction of the grain than naturally occurring woods, but it has a distinct advantage in being stronger and more resistant to bending *across* the grain. For example, you can bend a large sheet of ⅛-inch material, but to break it or split it is a virtual impossibility. Another very important

To save production time and produce panels of dependable quality, hydraulic presses are used to form the plywood panels under both heat and pressure.

Thin veneers of hardwood previously spread with urea resin glue are assembled with each adjacent layer at cross grain and then carefully placed in the mold.

Typical molded plywood forms in various sizes taken from current production at the Laminated Veneers Company plant in Long Island, N.Y.



Carefully selected veneer faces are chosen for uniformity of grain, appearance and character. These are cut to size and later assembled for synthetic resin coating before laminating.

advantage of plywood is that there is practically no expansion or contraction, either with the grain or cross-grain, the fibres running one way resist the swelling action of the fibres running at right angles to them. Therefore, rather than materially change in size, as moisture content increases or decreases, various thicknesses, or plies, change only slightly.

The furniture industry concerned with mass production on a quality level can find these inherent advantages of plywood of great interest. Although most plywood in the past has been fabricated in flat plain sheets, much of this material is now laminated in curved forms. This is more expensive, of course, because special molds are required for this type of processing. However, this extra expense has been more than offset by the greater economies of construction which are possible because of more simple assembly with the new curved forms.

Laminated veneers offer the furniture manufacturer several advantages over solid wood. For instance, uniformity is possible in finished product because the laminated sheets are free of such weakening imperfections as knots. Heretofore discarded pieces of wood may be assembled to form large curved masses. When such laminated woods are used, the drying process is accelerated since the product can be dried as it comes from the rotary cutter. In addition, when the wood is treated with urea or formaldehyde resins, its strength, durability and moisture resistance are increased considerably.

Combined with good design the physical properties of laminated veneers provide a means of mass-producing at a quality level unattainable by conventional woodworking methods.

Many people think of plywood as a relatively modern material, yet its origin can be traced back to the 17th century. Italian, Dutch and French cabinet makers used veneers extensively on the furniture of that period. What *is* relatively new is the production of "stock-molded" plywood sections, a recent development in this country which is receiving considerable attention from furniture manufacturers interested in lowering costs without sacrificing quality.

Perhaps the best-known producer of this type of material is Laminated Veneers, Inc., of Long Island City, New York, a company organized in 1946 by Norman M. Kreizelman and Burton Bernard. This firm has developed a unique manufacturing process for the production of stock and special design molded plywood which has become an important source for many furniture manufacturers. Not only do Laminated Veneers, Inc. carry a stock of more than 50 standard molds available to those manufacturers who can use stock plywood shapes, but they also have excellent facilities for preparing special molds for those manufacturers who cannot employ the standard forms.

In the actual production of this material, precise control is maintained at all times. The most modern equipment is employed and because only the finest hardwoods are used, the finished product is of the highest quality.

Today, with rising raw material and labor costs facing the furniture manufacturer, it is most probable that more and more the possibilities of reducing costs through the use of laminated plywood will be explored. The fact that stock molds are available provides an excellent means of pretesting the value of the material in the mass production of furniture aimed at the quality market.

Wood Testing Fixtures Now Available

Wood testing fixtures for standard testing machines are being produced by the Baldwin Locomotive Works, Testing Equipment department, Philadelphia 42, Pa., and are now available to testing laboratories, it is announced. These fixtures are designed to meet the latest specifications of A.S.T.M. (D-143-48).

Fixtures include those for the transverse or static bending test, tension parallel-to-grain, cleavage, hardness, compression perpendicular-to-grain, and shear parallel-to-grain. Crosshead pacing, which is pecified for all of these tests, is provided by Baldwin's chain drive ram pacer, with bending test fixtures on a standard Baldwin testing machine.

The Significance of RESEARCH TO INDUSTRY

The stimulation of research interest in the Wood Products Industries needs to be increased manyfold in order to continue to insure progress in developments

By

C. D. Dosker*

The subject assigned me is very general in its scope, and I will confine myself to the significance of research to the forest products industry.

We who are assembled here are members of the Forest Products Research Society. As scientific societies go, we are very young; as a matter of fact, we are an infant. The products, however, which this Society represents are ageless in their service to mankind.

The formation of the Forest Products Research Society is probably the most significant thing that has ever happened to this industry. The effect of this organization is bound to make itself felt not only on the economy of our industry but on the economy of our entire country. This Society is of tremendous importance to those who use the products of the forest in any form.

Research in forest products is divesting wood of the garments of tradition, and at last we are viewing it as a basic raw material capable of untold products that will benefit mankind.

The Society has greatly increased its membership since its organization. This is significant because it indicates a desire, or urge if you choose, for increased knowledge about wood, a recognition of a need, a realization of the need to a scientific approach to many of our problems. We are, as a society, a group that is the outgrowth of the impact of World War II upon the wood-using industry. Many of us actively participated in some of the research work that was done on wood during the war.

Effect of Wars on Research

It is rather interesting to note that throughout history wars have had a tremendous influence upon scientific development. I believe that it is safe to say that organized research had its beginning in the United States in 1863. In that year, by act of Congress, the National Academy of Sciences was formed. Its purposes were to investigate and report upon scientific suggestions. Again in 1916, the National Research Council was formed by the National Academy of Sciences, broadening the scope of research. Developments during World War II continued this trend in research organization.

In every war man hours of effort are packed into research at a rate many times the rate of normal research in peacetime economy. It was so in World War II, and products and processes developed for war now are being converted into peacetime needs.

It has been stated, and I believe it is unquestionably true, that scientific knowledge advanced 20 years as a result of World War II. This is particularly true in the case of wood, and it is a very important thing to remember in connection with our industry. Some degree of the amount of this work can be obtained by simply looking through the "Forest Products Research Guide." This guide to research is published by the National Lumber Manufacturers Association in an effort to avoid research duplication, and to give source material. It is being kept strictly current. No laboratory or individual interested in research should be without this guide.

Present Limitations of Knowledge

We believe in wood. We do more than this; we believe in the future of wood as a raw material of rather unlimited possibilities. If we are honest, we will recognize the current limitations of our knowledge of wood as a raw material and of the extreme importance of increasing this knowledge.

Much of this knowledge which we must acquire is basic. There is a tremendous job that must be done in the chemical field in qualitative and quantitative analysis of the various species of wood. Before we can combine wood with other materials, we must

*Paper presented at the recently held Third Annual National Meeting of the Forest Products Research Society, in Grand Rapids, Michigan.

know what we are putting into this combination. We must know the answers to such interesting little problems as why the sap of the hard maple produces an edible syrup, when on the same land the adjacent oak tree produces an entirely different sap.

We must yet learn how to stabilize wood by a cheap commercial process. We do not yet know how to fireproof wood by any simple process. We still do not understand the complexities of photo-synthesis. We have yet much to learn about the potential possibilities of hybrid trees. We need complete knowledge of the chemistry of wood.

We all see and feel the need for more research in wood. What we have not yet discovered is the means of breaking down the lethargy that grips so many phases of the wood-using industry. As an industry, it has been in a deep sleep, drugged by the traditions of its ancient crafts. The masterpieces in wood are works performed by hand. Skill with the hand and not the head, practical knowledge that has not necessarily been correct has guided this industry in its course throughout the centuries. We do it a certain way because grandpa did it that way. As an industry, we suffer from a disease I call "Grandpopyitis." As an industry, we must awaken to see those new horizons of products and processes that can flow from the research laboratory.

The industrial revolution started in this country shortly after the Civil War. With it came the machine age, the first of the mechanized woodworking tools, but really little progress has been made in the tools of our industry. New methods, new tools, new processes have been developed by those industries competing with wood in the consumer markets. We, the Rip Van Winkle of industry, are at last rubbing our eyes to take a look around us. This is significant.

What Is Research?

What is research? That is a good question, and to it there is no single simple answer. Research means many different things to different people. Let us recognize one very important fact, "people think as they are taught to think, and see what they are taught to see." We in the Forest Products Research Society must do something about this very important fact if we would seek to vitalize our industry.

I have always considered that research falls into two classes. The first is basic research, dealing in the fundamentals of wood as a raw material. It is a time-consuming and money-consuming job and can best be done by publicly financed laboratories or by institutional research. The second class of research is that which most vitally effects industry, and this is product research or product development.

These two types of research combine to form a tool of industrial management. Both types of research are essential, but it is the product research that carries the accomplishment of basic research to its final destiny—the products in the channels of commerce for better living.

Expenditures for Research

It is very difficult to determine the actual amount of money spent annually in research in our country. Those sources of information that I have checked indicate that the annual expenditure is from $180,000,000 to $250,000,000. There is a vast difference in the amount spent in various industries. In some industries as much as 2 cents out of every sales dollar goes back into research. Generally, it is nearer 1 cent. Those industries which are most progressive are also those which spend the most in research. It is rather interesting to note that the textile industry and the lumber industry are among the lowest in all major industries in the amount of money spent for research.

How pitifully small is the amount spent in forest products research in comparison to the value of its products. There is no clearing house within our industry by which the total amount that is invested in research can be determined. In the guessing contests that I have had with many individuals within our industry it seems agreed that at the present time less than $5,000,000 is being spent annually. It is a guess, and it includes the funds expended by the United States Forest Service, which amount to around $1,250,000 a year.

In 1946, the last for which total figures are available, the estimated mill value of 36,500,000,000 feet of lumber produced was $1,400,000,000. This is lumber only and does not include veneer, plywood, pulpwood, railroad ties, and other products of the forest. The average mill value of the lumber is estimated at $40.00 per thousand feet. One percent of this would have amounted to more than $7,250,000, which the lumber industry should, in my opinion, have expended.

Some Needed Research

You might ask how a sum like this could have been wisely used? Let me just suggest a few problems requiring study:

What about low grade lumber? All phases of the lumber producing industry worry about it. Who is going to use this lumber and for what products? Is the low grade lumber problem a passing one? No, of course not, it is an ever-increasing one. It will get worse, not better. A tremendous job in market research, product research, and process research is needed in this case.

What about hybrid trees for tree farms? Hybridization did a job for the corn grower.

What about fireproofing of construction lumber? Each year we see lumber legislated out of the construction fields. We spend money defensively fighting building code regulations. Why not try a new approach and develop a cheap, efficient method of producing a highly fire-retardant construction lumber? Where could you spend $7,000,000 in constructive research? That is not the problem. The problem is where to start first.

Even an uneducated farmer knows that you cannot continue to take from the soil without fertilizing. As all the forest products industry is farming, research is the tool by which the soil of markets can be fertilized and dollars spent in research is fertilizer.

Louis Pasteur once said, "Science is the soul of the prosperity of nations and the living source of progress." What is true of nations is also true of the industrial segments that comprise those nations. We are engaged in an industry that is notoriously nontechnical. Most of its concepts are traditional.

Research Men

Let us examine for a moment the men who operate this "tool of management" that we call research. There are about 50,000

of them in our country, the scientists who work in 1,800 private and public laboratories. They are the men who keep the wheels of the more progressive industries turning at full speed. Far too few of them are engaged in our industry.

What is the power that makes a researcher tick? Well, I feel that the urge to research is an irresistible force motivating a curious mind to seek an unpredictable answer to a problem. The mental fuel upon which all research lives is "why." The antidote to excessive enthusiasm is "How do you know."

Knowledge alone does not qualify the scientist to engage in research. The qualification for research is knowledge "plus," and it is a great big "plus," and that "plus" is imagination. No new product or no new process can come from the laboratory until it has first been "imagineered" and then engineered. To do this requires a vast scientific knowledge of materials and processes and the imagination to combine them.

While many important discoveries are the result of pure chance, you cannot depend on chance to answer your problem. Hours of repetitive drudgery in experimentation, careful observation of minute details, and logical interpretation of results produce ultimate answers.

I have previously said that "people think as they are taught to think, and see what they are taught to see." It is in this statement that I believe we can find the answer to the problem of research in the forest products industry. In it alone you can find the reason that accounts for the fact that many processes and products completed in the laboratory and ready for pilot plant operation continue to lie dormant. What is more discouraging to a researcher than the "stillbirth" of an idea. Why should many of the products and many of the processes still lie unused. The answer is obvious. The woodworker has never been told to think in terms of the benefits that accrue to him from research. In his myopic vision he cannot see what is going on in those competitive industries which are stealing his markets.

A Change in Habit of Seeing and Thinking

The prime function of this Society within the next few years must be to change the thinking and the seeing habits of the men in the woodworking industry. They must, as an industry, be taught the significance of research. They must be shown the myriad of products and processes that lie on the frontiers ahead.

No matter to what extend money and time are spent in research, no beneficial results can accrue to any industry until that industry itself has the capacity to absorb and utilize this research. By capacity, I do not mean size of industry. I mean mental capacity within management. You cannot pour 5 gallons of products or processes into a 1 gallon can. You cannot pour 5 gallons of knowledge into a cranium that will only hold 1 gallon. We must attract to this industry more men with a scientific background if we are going to plant research on soil that will be productive. That, gentlemen, is the problem of the Forest Product Research Society. This Society is the stepping stone by which this industry can be supplied with containers adequate to hold these new products and processes.

It is not enough that management alone must have this capacity, it must extend to the plant level. The plant level is the "use" level, and understanding at this level is essential.

To me this matter of thinking and seeing, this matter of capacity, is the outstanding significant thing in regard to research in the forest products industry.

Koppers President Elected to Board of Carborundum Co.

Niagara Falls, N. Y.—General Brehan Somervell, President of Koppers Company, Inc. was elected a member of The Board of Directors of The Carborundum Company at a meeting of the Board here June 27, H. K. Clark, President announced.

"The Carborundum Company is fortunate in having General Somervell as a member of its Board of Directors," Mr. Clark said. "His unusual qualifications as an engineer, and his outstanding service to his nation and to industry has made his advice and counsel sought by many."

Accepting this Directorate, General Somervell said:

"I am pleased to be formally associated with The Carborundum Company which has occupied a place of strategic importance in our economy for more than half a century, producing a large percentage of the abrasive and refractory products essential to industry."

In addition to being President and a Director of Koppers Company, Inc., Pittsburgh, General Somervell also is a director of the Eastern Gas and Fuel Associates, Boston, Mass., Westinghouse Air Brake Company and Union Switch and Signal Company, Pittsburgh, and the Montreal Coke and Manufacturing Company of Montreal, Canada.

General Somervell was graduated from the United States Military Academy at West Point rising through all ranks of the U. S. Army to that of General. He served during two World Wars and from 1942 to 1946 was Commanding General of the Army Service Forces.

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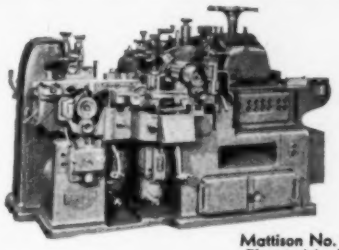

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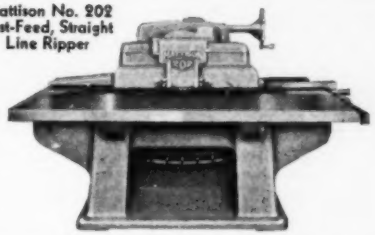

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MATTISON MACHINE WORKS
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Thermobloc heating unit installed in the woodworking shop of American Community Builders, Park Forrest, Illinois. Note screens at base to prevent sawdust from entering unit.

DIRECT FIRED HEATING IN WOOD SHOP

American Community Builders tackled a big job when they undertook the construction of Park Forrest, $30 million satellite town 27 miles south of Chicago's Loop. This community, built to house 30,000 persons, is to be a complete new city, without smoke, clatter, traffic jams or smells and with a land density of only 10 families per acre.

Architectural papers have told of the unique methods used in the construction of the homes in this "planners delight." We are concerned principally with one problem, a problem that resulted from the need to keep production of woodwork going all winter long.

Lumber prefabbing is done in a mill which was erected on the site. During the winter months, when outdoor work was almost at a standstill, enough lumber was dimensioned in the mill for 60 buildings and enough trusses fabricated for 500. (Lumber which cannot be predimensioned is cut in gasoline-saw sheds which are hauled around the site on skids). When prefabrication is completed for a number of buildings, the material is taken to "dumps" in the area.

The job of heating the woodworking building during the winter months was a tough one. A steam plant promised to be quite expensive. The use of pot bellied stoves, salamanders or any open flame burner was out of the question because of the hazards of ex-

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plosion set up by the presence of saw-dust and wood shavings.

The answer was found in a Thermobloc direct fired Industrial heating unit, which could be shielded in such a way as to result in a safe installation.

As shown in the photo, the oil burner and the air intakes were covered with a wood frame that held fitter pads. This kept the saw dust out of the air stream and away from the fiame. The total cost of the unit, installed, with all the necessary safeguards was only $1400, as against a figure of close to $4000 for a steam boiler. The unit used is a direct fired unit with high overall efficiency (82—86%). It is only 30" in diameter.

The Thermobloc sits in the area to be heated and discharges the heat, direct into the working area. In this installation, small ducts were used to carry heat from one outlet nozzle to an enclosed office and wash room. The rest of the 550,000 Btu. output of the heater is discharged direct into the working area. The unit used in the American Community Builders project at Park Forrest was manufactured by Prat-Daniel Corporation, Thermobloc Division, East Port Chester, Connecticut.

Dr. Forsaith Retires

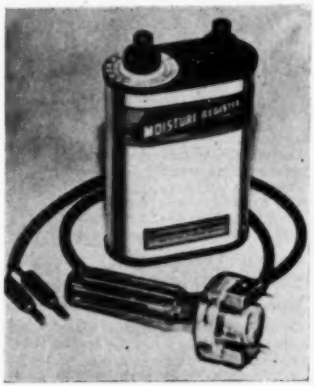
One of America's first wood technologists, Dr. Carl C. Forsaith, has retired from the faculty of the New York State College of Forestry, Syracuse, N. Y., after 32 years of service in forestry education. He leaves the college June 30 to live on his farm birthplace near Auburn, N. H., much of its 400 acres in white pine forest.

Beginning his career as an educator 35 years ago, Dr. Forsaith left the post of biology instructor at Dartmouth College to teach wood technology at the New York State institution. Then only five years old, it was revolutionizing old concepts of forestry with training expressing the view that foresters should serve wherever wood serves.

Announce New Moisture Testing Instrument

A new midget-size instrument for testing moisture content in lumber that slips easily into the pocket and is priced at only $75.00, has just been announced by Moisture Register Company, 133 North Garfield Ave., Alhambra, Calif. It is specially designed to make possible accurate moisture testing at low cost by lumber dealers, wood workers and kiln dryers.

Believed to be the smallest instrument of its kind ever produced commercially, this new Moisture Register model DC-1 measures only 3¾"x5" and weighs less than two pounds. It is scientifically engineered on the Me-



gohm Bridge principle, and gives accurate results over a full range, from 8% to 29%. Tests inside kilns are accurate down to 4% at kiln temperatures.

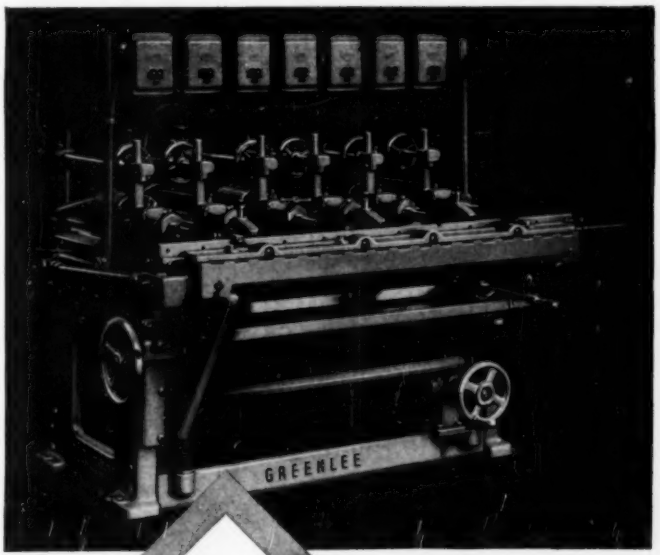
Moisture content readings for most woods may be made direct from the dial. In addition, easy-to-read calibration tables are furnished for 35 woods. Condensed tables are printed on the instrument shell, and complete tables are supplied in booklet form.

Construction is simple and sturdy. Standard-type miniature batteries and tube give long service. The instrument is fully guaranteed against defects in materials or workmanship. Complete details will be sent free upon request to the manufacturer, Moisture Register Company, 133 North Garfield Avenue, Alhambra, California.

A Northern farmer, visiting a Southern farmer, pointed to a lanky porker, which just then happened to be rubbing himself against a tree.

"I suppose that's what you call a 'razor back' hog, isn't it?" said the Yankee.

"Yes," his host agreed, "see, he's honing hisself now!"



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Foreign Woods

Origin, Use, Properties and Nomenclature

By George N. Lamb

SUCUPIRA (Bowdichia—two species) Leguminosae (Pea) Family

SUCUPIRA grows in Brazil, Venezuela and in the Guianas but supplies come principally from Brazil. The wood of the two species is not readily distinguishable. It may reach a height of 150 feet and a diameter of 4 feet but most of the logs that come to market are not over 18 inches in diameter.

The wood has whitish sapwood and the heartwood is a dull chocolate to reddish brown. It is very heavy, hard, tough and strong. Sp. gr. 1.00. The grain is rather coarse and interlocking, making it difficult to work but it finishes fairly smoothly. It is durable. In lumber form it has the general appearance of weathered English Oak. It has been imported for veneer use in limited quantities.

Other names:
U. S. A.—Amoteak, Hudoke and Brownheart
Brazil—Sapupira, Sucupira-Assu
Venezuela—Alcornoque
B. Guiana—Mach

Other woods called SUCUPIRA:
Diplotropis—Brazil, closely related to Bowdichia, rich brown wood
Ferreirea—Brazil, yellowish brown wood—not important
Pterodon—Brazil, Sucupira liza—wood brownish—not commercial
Vatairea—Brazil, Sucupira amarella—wood light brown, not commercial.

DEGAME—Calycophyllum candidissimum Rubiaceae (Madder) Family

Degame ranges from Cuba and southern Mexico to Colombia and Venezuela. The tree is from 40 to 65 feet in height and 8 to 20 inches in diameter. While this wood is found over a wide area, commercial supplies come entirely from Cuba. It is shipped in slender logs known as spars.

The heart wood is brownish and the sapwood is thick and colorless. The texture is fine and uniform and the wood is usually straight grained and is heavy, hard, tough and strong. Sp. gr. 0.80 to 0.85.

It is primarily a bow wood and shares the market with Lancewood and both are prized in the manufacture of fishing rods. There are other species of Calycophyllum in South America but they are not suitable for archery bows.

Other Names—Lemonwood, Degamme
Cuba—*Dagame*
Mexico—*Cameron*
Central America—*Madrono*
Honduras—*Solano*
Costa Rica—*Surra*
Panama and Colombia—*Alazano*

LANCEWOOD—Oxandra lanceolata Anonaceae (Custard apple) family

This genus has some twenty species in tropical America but only two occurring in the West Indies are suitable for archery bows. Cuba and Jamaica are the principal sources. O. lanceolata is the better of the two. Lancewood is a small tree and the wood comes in as poles and are known as spars. The trees grow to considerable size but develop dark heart wood. Only the thick yellow sapwood is in demand so lancewood spars are mostly from young trees.

The wood is hard, heavy, fine textured, straight grained, tough and elastic. Sp. gr. 1.00. Formerly important in the vehicle industry. The demand now is mostly for bows and fishing rods.

It shapes the market with Degame, also from Cuba.

Other names:
Germany—*Lanzenholz*
France—*Bois de Lance*
Spain—*Palo de Lanza*
Cuba, Puerto Rico, Santo Domingo—*Yaya*

GAULAN—GAULAN—Alfaroa costaricansis Juglandaceae (walnut) Family

A small to medium sized tree found only in Costa Rica where it is reported abundant in the mountains south of

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Roller table, 2-h. p. motor drives tenon heads and cut-off saw. One-h. p. motor drives cope spindles with endless Vee belts. Top cope arbor threaded to receive check rail slot cutters cutting 2¼" deep. Belts and heads well guarded with metal covers.

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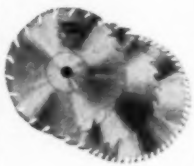

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Ask your supplier or write for name of distributor nearest you.

OHLEN-BISHOP

Ohlen-Bishop Mfg. Company, 1308 Kinnear Rd., Columbus, Ohio

Cartego. Discovered and named by Dr. Paul Standley of the Museum of Natural History, Chicago. Only sapwood was collected and its structure indicates a relationship to *Engelhardtia*, another minor genus of the walnut family. If the importer of the wood reads these notes we hope that he can supply us with a specimen of this wood.

FIDDLEWOOD—
Bourreria huanita
Boraginaceae (Borage) Family

This tree ranges from southern Mexico to Salvador. It is not a timber tree in spite of the fact that it has been listed among the postwar imports. The flowers go into a fermented beverage and also for perfuming tobacco and as a flavoring. It is a small tree reaching a height of 50 feet and a foot in diameter.

The heart wood is brown with lighter streaks. It is heavy and hard and has a fine straight grain. It works well and finishes smoothly. It has no commercial possibilities.

Other names:
Florida, British West Indies—*Strongback, Strongbark*
Cuba—*Agalla*
Puerto Rico—*Spoon Tree*
Mexico—*Huanita*
Other woods called *Fiddlewood*:
Florida and West Indies—*Citharexylum*
British West Indies—*Cierodedrum*
(Except for the fact that, as far as possible, we use the name under which a wood is imported. *Cierodedrum* is doubtless the original "Fiddlewood" of the new world. It has thus been known for at least 250 years. It is not used for fiddles but the name is thought to be a corruption of the French name "Bois Fidele," referring to the strength of the wood.)
British West Indies—*Vitex* (also called Lizardwood)

Southwestern News

By Staff Correspondent

Ingalls, Ark.—Fire did damage estimated at $25,000 to a dry kiln and lumber at the plant of Williams Lumber Company here June 19, 1949. The firm was established here in October, 1945, and has suffered three fires. In January, 1948, the sawmill burned with a $25,000 loss, and in 1946, the planing mill burned. The plant employs about 115 workers and is owned by Carl Williams.

* * *

Dallas, Texas—Woodcraft Sales Company, merchandise, was granted a 50-year charter of incorporation June 13, 1949. Authorized capital stock was listed at $25,000. Incorporators: R. W. Anders, C. B. Sutton and Dr. S. E. Potts.

* * *

Hope, Ark., June 27—R. E. Bruner, president of the newly-organized Hope Paddle & Oar Company, has established a plant at the former Southwestern Proving Ground of the War Department here to manufacture a complete line of paddles and oars. Mr. Bruner has been in the lumber and wood products business here for several years.

* * *

Sheridan, Ark., June 27—A branch plant of the La Pierre Sawyer Handle Company of Sheridan is being established at Benton, Ark. at the plant of the Parker Stave Company.

Northeastern News

By Staff Correspondent

Potsdam, N. Y.—Gordon Smith has leased the old woodworking shop from the M. P. Hawley estate which he will operate. For many years the shop turned out high grade caskets of quartered oak, as well as a line of furniture. The shop has been idle for several years. Mr. Smith will conduct a general woodworking business.

* * *

Philadelphia, N. Y.—The first chair factory in this area will soon be gone. The building is being razed after a long period of inactivity. The original Roberts factory made dining room chairs. Later, a new factory was built and was called the Indian River chair factory and specialized in Morris chairs.

Hyster Co. Opens New So. Cal. Showroom

The Hyster Company opened its new Los Angeles area retail truck sales and service facilities at 5301 Pacific Blvd., Huntington Park, California on May 20 with an open house lasting from 2:00 until 9:00 p.m.

Several hundred visitors toured the large show room, parts and service departments, offices, and adjacent storage area of the 7500 square foot structure, said to be one of the most modern and efficient materials handling distributions in the United States.

On display were several models of fork lift trucks with special purpose attachments, two models of straddle trucks and a mobile crane manufactured by the Hyster Company whose factories are located in Portland, Oregon; Danville and Peoria, Illinois.

You Can Always Depend on
BACON-McMILLAN
ROTARY CUT BAY POPLAR AND GUM
VENEERS
For QUALITY
Uniform thickness, smooth texture and flat, straight grain are assured qualities in Bacon-McMillan Veneer. Only tall, straight, limbless Bay Poplar and Gum trees are used. Thus, the possibility of warpage is reduced to a minimum.
Selective cutting, expert workmanship, careful handling have made Bacon-McMillan Veneer consistently high in quality since 1910.
For DELIVERIES
The nearby timberlands supplying logs for the Bacon-McMillan plant are owned and cut by Bacon-McMillan. The source of supply is controlled year in and year out.
This makes possible accurate planning from forest to shipping platform for assured deliveries on promised dates.
BACON-McMILLAN MANUFACTURING CO.
STOCKTON, ALABAMA

Kindly mention Wood Products *when writing advertisers.*

Develop Staypak, a Hardwood Made By Compressing Softwoods

A super hardwood made from softwoods — cigarette-proof, alcohol-proof, and with its natural wood grain intact—is the newest product of lumber industry research.

The product, a compressed wood called Staypak, was perfected by the Western Pine Association Research Laboratory in Portland, Ore., and is now ready for commercial manufacture. The process has been made available to members of the association.

Staypak differs from other hardboards made of compressed wood fibers in that it is the result of compression of a whole board down to approximately one-third of its original thickness. The natural wood grain is retained and the board comes from the press with a natural high gloss. Water will remove the gloss but it can be maintained by clear-coating the board either before or after pressing.

Tests show Staypak to be from three to ten-fold stronger than the original natural wood. It is ten times harder and is resistant to chemical attack, abrasion and scuffing.

Wide Variety of Uses

The exceptional hardness of Staypak—its specific gravity is 1.35—together with flame and moisture-resistant qualities, make it an ideal material for flooring, paneling, bar and table tops, tool and knife handles, bearings, shuttles, furniture, bowling alleys and signs. A multitude of other uses are expected to develop when commercial manufacture is started.

Staypak can be produced from nearly any softwood of low resin content. Experiments conducted with White Fir, a lumber species in plentiful supply throughout the western states, have been outstandingly successful. Englemann spruce and western red cedar can also be used.

Initial work on Staypak was done at the Forest Products Laboratory in Madison, Wis., but the problem of end and edge expansion after pressure had been removed prevented its economical manufacture. At this stage the project was taken on by the Western Pine lab where a press was ultimately developed to prevent the moisture loss during compression which caused the boards to later pick up atmospheric moisture and expand after release.

Heat and Pressure Does It

Lab engineers describe the process by which Staypak is made as essentially one of compression and heat. A board is subjected to a pressure of 1,500 pounds per square inch at a temperature of 325 degrees Fahrenheit within the press. It remains there for a relatively short time.

No bonding agent is used to hold the board to its compressed size. The natural lignin in the wood flows under heat and acts as the cementing agent. Once pressed, the board will not lose its shape under subsequent moisture or atmospheric conditions.

A piece of Staypak feels as hard and heavy as a smooth piece of slate. Any mark or design cut into the wood before pressing is still visible although not perceptible to the touch after processing. Designs may be impressed into the wood by applying resin-impregnated colored paper prior to pressing. The paper becomes part of Staypak in the press and forms a continuous smooth surface with the rest of the piece.

But very probably the majority of manufacturers will prefer to market the product in its natural state. "Manufacturers of other materials often try to make their products look like wood," a lab spokesman said. "We already have that appearance in Staypak, —and we'd like it to stay that way."

Launch Adv. Program for Fir Plywood

Tacoma, Wash.—The youthful Northwest plywood industry, oft-described as an offshoot of lumbering, has dipped into the big chips and come up with a $1,000,000 advertising program to build an even greater market for the big panels.

"Drastic cuts in plywood prices have been made as a post-war readjustment, thus making the panels immediately competitive dollarwise and opening many new markets." That was the announcement of Arnold Koutonen of Olympia, president of Douglas Fir Plywood Association, the industry trade-promotion organization, as he told of the sales promotion program.

"Since the readjustment of price levels has not been accompanied by a corresponding reduction of manufacturing costs," Koutonen explained, "producers must look to expanded sales volume to ward off substantial losses."

And he added that the manufacturers feel now is the time to broaden demand as fir plywood is again in good supply throughout the nation for the first time in years.

Spreading Industry

Some 36 firms operating 44 separate factories in 30 Washington, Oregon and northern California cities and towns are subscribing the money to further activate the nation's desire for plywood, already recognized as "the wood of 1,000 uses."

Compared to any previous fir plywood promotion program, this one-year plan of sales stimulation approaches the stature of the fabled forest giant, Paul Bunyan, who could fell a great tree with a single axe blow. But the plywood makers, who are proficient in bonding thin sheets of wood into big panels, merely expect to build markets rather than cut a wide swath, Koutonen assured.

Douglas fir plywood production is currently running behind last year's record output of nearly two billion square feet, and with seven more plants the industry capacity is somewhat greater. "It's the first time in a decade that fir plywood makers could use a few more orders, and the industry proposes to create them by telling home owners, builders and industrials how plywood can serve their needs better," according to Koutonen.

More Outdoor Panels

Before the war, little of the exterior plywood with waterproof bond was produced and only a half dozen plants could make it, the industry leader reviewed. Now, most of the 44 factories have pressing equipment to set the special adhesives, while meantime the performance and durability of the extra-quality material has been thoroughly proved. "Much attention will be focused on houses having siding of plywood, on plywood farm buildings, boats, trucks, railroad cars," he stated.

The expanded advertising will start almost immediately and will be addressed for the first time to consumers, farmers and industrial users. Up until now, the program has been directed primarily toward the nation's 30,000 retail lumber dealers who sell plywood to ultimate users, and to specifiers such as architects and engineers.

Sales literature, dealer helps, motion pictures of uses and publicity all are a part of the program.

Constant vigil over quality of product to assure complete customer satisfaction is a part of the broad plywood sales-promotion. Nearly 250,000 samples taken at random are tested each year to assure customer satisfaction, and the panels are grade-marked for positive identification as to type and grade. As a part of the tests for the outdoor type plywood, the material must withstand repeated boiling without affecting the strength of the adhesive bond.

One of a series of messages to help you increase your understanding of business paper advertising, and its effect on your job.

How advertising puts money in your pocket

WHEN YOUR COMPANY invests in a new machine, they can figure almost to the penny what they'll get back in better production.

By reducing the manufacturing cost per unit, the new machine increases your company's chance to earn a profit. Your workers can earn more because they're *producing* more. That's the only way your company can put more money into everybody's pocket – including yours.

The same principle applies to advertising.

For advertising works just like a machine. By mechanizing part of the selling process, advertising reduces the cost of *manufacturing a sale*. And that, too, means more money in everybody's pocket – including yours.

What does it take to "manufacture" a sale? Usually, there are five basic steps involved:

1. **Seeking out prospects**
2. **Arousing their interest**
3. **Creating a preference for your product**
4. **Making a specific proposal**
5. **Closing the order**

Any good salesman could handle all five. But no salesman should *have* to – not when advertising can perform the first three for him, and do them so much more *economically*.

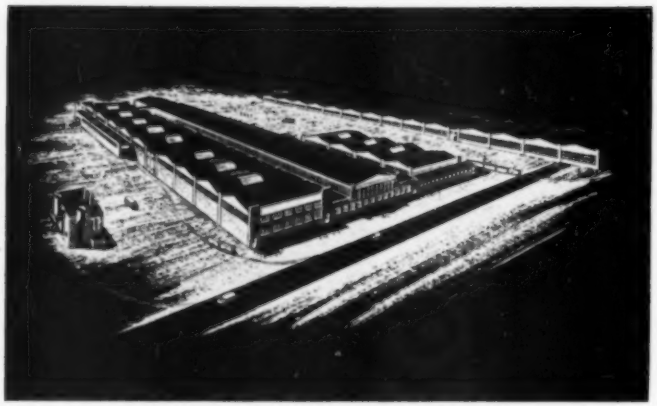
Especially is this true of advertising in the business press. Nowhere else does the machinery of advertising operate so efficiently. Nowhere else does it go so far toward reducing the cost of manufacturing a sale!

ABP

WOOD PRODUCTS

is a member of The Associated Business Papers, who are sponsoring this campaign. If you'd like reprints of this advertisement, or the entire series, to pass along to others in your organization, we'll be glad to mail them to you.

Kindly mention WOOD PRODUCTS *when writing advertisers.*



New Carborundum Plant, Services Shown in 32-Page Book

To mark completion of its modern factory for the development and manufacture of coated abrasive products, The Carborundum Company has published a 32-page, two-color book presenting the outstanding features of its new service, research and production facilities at Wheatfield, New York.

Entitled "The Finest in Coated Products . . . Carborundum," this book is illustrated with dry brush drawings and describes the closely controlled, scientific methods employed at Wheatfield which assure production of quality abrasives. In addition, it outlines the importance to industry of these abrasive products for production of more and better goods, at lower cost.

All phases of operations in the new Wheatfield plant, embracing more than 12 acres of floor space, are covered in this book . . . from the receiving platforms where raw materials are delivered by rail and truck . . . to the shipping room where consignments of finished products are sent on their way to district warehouses, distributors, consumers.

It shows the laboratories . . . where research men develop new and improved products . . . and where production engineers check manufacturers for maintenance of product quality. It contains pictures of storage facilities for raw materials, semi-finished stocks and completely packaged finished products.

This book takes readers on a conducted tour of the new Wheatfield plant. For example, here for the first time, one can see the gigantic making machine which applies the glue or resin adhesive, coats abrasive grain evenly on backings of paper, cloth, fibre or combinations of these materials, dries and cures ten miles of material simultaneously.

Manufacturing steps for converting huge "jumbo rolls" into discs, sheets, rolls, belts and special shapes are illustrated in this new book, showing the efficient "Straight line" production methods employed in the new Wheatfield plant.

Thus, The Carborundum Company has opened the doors of its new Coated Products Division plant to industry so all may see how carefully "The Finest in Coated Products . . . by Carborundum" are manufactured . . . and be informed of the extensive engineering and distribution services that are extended to industry throughout America.

Books Available Upon Request

Engineers, plant superintendents, production supervisors, purchasing agents and general managers will be interested in obtaining copies of "The Finest in Coated Products . . . Carborundum." It will be mailed on written request to The Carborundum Company, Post Office Box No. 337, Niagara Falls, New York.

Sou. Pine Heads Sail to Forestry Conference

New Orleans, La.—H. M. Seaman, President of the Southern Pine Association and Vice-President of Kirby Lumber Corporation, Houston, Texas, sailed aboard the Liner Queen Elizabeth from New York City on June 30 to attend the Third World Forestry Congress to be held in Helsinki, Finland, July 10 through 20, H. C. Berckes, Secretary-Manager of the Southern Pine Association, announced recently. Mr. Seaman will be an official United States Government delegate to the Forestry Congress and will be accompanied by Mrs. Seaman.

The Third World Forestry Congress was originally scheduled for Helsinki in 1939 but had to be cancelled due to the war. The First Congress was held in Rome, Italy, by arrangement with the International Institute of Agriculture in 1926 and the second conference took place in Budapest, Hungary, in 1936.

Richardson Boat Co. Reopens Plant

North Tonawanda, N. Y.—The Richardson Boat Company has reopened after an 11-week strike by the CIO United Electrical Workers. Leon E. Travis, company president, said he did not know how many of the firm's employes would be recalled since the strike has resulted in many order cancellations.

NO LEMONS FROM GAMBLE BROTHERS!

You hit the jackpot every time you put your money into Gamble Brothers' fine core stock. Free from sunken joints, made only from carefully selected and thoroughly dried lumber, and machined with precision, it pays off every time.

MANUFACTURERS of fine furniture and other wood products quickly learn that Gamble Brothers' more than fifty years of experience and "wood know-how" helps them solve their problems with dependable, well designed dimension hardwoods: core stock, solid parts, curved or flat laminates in lumber or veneer. They know they get *no lemons from Gamble Brothers.*

Gamble Brothers (Incorporated)
Engineered Wood Parts in Southern and Appalachian Hardwoods or Mahogany

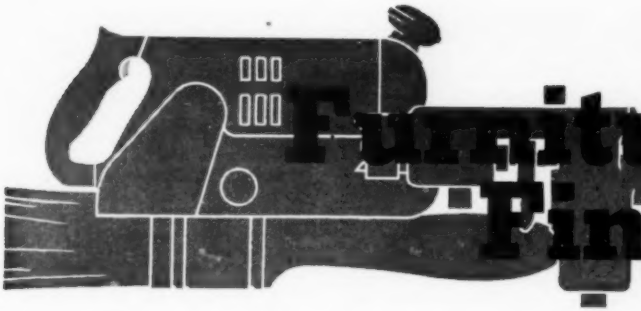
MAIN PLANT: LOUISVILLE 9, KY.—BRANCH: MONTGOMERY, ALA.

"Tool Up With Woodworkers"

DOVETAIL CUTTERS
for all brands of machines

Made on new precision automatic machines designed expressly for making dovetail cutters. Result, all cutters exactly alike. Standard cutters in stock. Can furnish all kinds of special cutters when sent samples.

Woodworkers' Tool Works
221 S. Jefferson St.
Chicago 6, Ill.



Furniture Finishing

The Importance of Proper Care and Storage of

FINISHING MATERIALS

By
W. T. Smith

Even in the pre-war days when labor and space were less at a premium than now, storage and stock handling of finishing materials frequently left much to be desired. Most drum lots of stock are stacked outside in the weather and few are elevated on skids and equipped with proper faucets to facilitate emptying and to eliminate spillage. Smaller containers such as five gallon cans and pails are usually stacked as they come in and seldom used on a perpetual inventory basis and emptied in the order received.

In the establishment of any consumer using quantities of such materials, the ideal arrangement is, of course, to have one individual solely responsible for the stocking, distribution, stirring and reducing of all such materials. Stipulations on the part of the vendor vary widely on the matter of reduction, for example, and the instructions seldom seem to reach the right person in the consuming personnel. Application operators also have, not infrequently, their own ideas of the correct consistency of materials and proceed to adjust them to their own satisfaction. Uniformity of quality, maintenance of production and correct functioning of the coating material depend on maintenance of a constant consistency, regardless of personal opinions.

While the size of packages employed for the shipping of finishing materials is usually controlled by the supplier in accordance with the type of material, customs vary in the matter and many buyers will express a preference for the maximum size of package in order to realize the normal differential in packaging costs.

It is entirely impracticable for the average consumer to handle any heavy pigmented material such as enamels, primers or surfacers in packages of greater than five gallons capacity. Even with a container of that size, the only means of thoroughly re-dispersing and completely mixing a material which has a tendency to settle is by complete removal of the top of the containers and a very thorough mixing from the bottom with a paddle long enough for a man to operate with both hands and to obtain adequate leverage—say about five feet long. It is impossible to redisperse a settled material in a fifty gallon drum by hand.

Careful Mixing Essential

Finishing materials as received by the consumer are the result of careful formulation, testing and adjustment. The amount of pigment is balanced against the vehicle to produce just the result desired but if even a minor portion of the pigment is allowed to remain untouched in the bottom of the container, the material cannot possibly function as was intended. Most finishing material manufacturers maintain elaborate drum washing equipment to remove from the containers the settled, dried material which has been allowed to accumulate in the bottom by the user.

The best insurance against improper dispersion of a heavy material lies in the use of a portable power mixer which can be inserted into the container and allowed to run until the mixture

is entirely homogenous. Wherever feasible, finishing material should be removed from the shipping package when the container is opened. A five gallon container of lacquer enamel, for example, should be thoroughly agitated, emptied, and a couple of quarts of thinner poured into the can as a rinse, the thinner to be used subsequently for routine reduction of the enamel. A small propeller type mixed of the bench type is ideal for five gallon containers, in lieu of which they may be stirred by hand as mentioned above if the top is removable or cut out.

Materials containing some pigmentation but in a light vehicle consistency such as sanding sealers, pigment wiping stains and some ready to spray lacquer enamels may show a fairly ready settling but in the form of a light fluffy precipitate which is readily redispersed by vigorous shaking or periodic inversion of the container. This, and to some extent, any form or degree of precipitation can be minimized by systematic inversion of the sealed containers in storage. In the case of five gallon containers, it will be found advantageous to invert the cans every day which will discourage the formation of a heavy precipitate in either end. Drums of such material may be stored on their sides and the entire row rolled down a quarter turn on each drum each day and rolled back the next. For containers of five gallons or less a mechanical shaker or agitator such as then used by retail paint vendors will be found valuable for maintaining complete dispersion of the contents.

Temperature of Storage

Much has been written on the temperature of finishing material storage space but, after all is said and done, not much can be done about it anyway. Let us be conservative, therefore, and state that a finishing material storage which does not go too far below zero or remain for too long at temperatures above one hundred may be considered satisfactory and need not be expected to cause damage to the material. Most low temperatures encountered in the continental United States will not harm a finishing material. Sustained high temperatures, especially above one hundred degrees Fahrenheit, may cause a permanent reduction of viscosity, especially in the case of nitrocellulose materials and will usually cause a slight brightening of flat lacquers due to a partial solution of flatting agents.

So much for the storage of finishing materials. The temperature at which they are used is, however, another matter. No normal finishing material should ever be applied, by spray, brush or dip, at a temperature below about seventy degrees. Between seventy and one hundred is the ideal working condition. The viscosity of such materials is roughly proportionate to the temperature within atmospheric limits and this is especially true of heavy varnishes and clear lacquers. Better flow and a generally better finish film will be realized if the temperature is kept between eighty and ninety, or just a little above comfortable work room temperature. In the event that it is not practicable, or not permitted by fire regulations, to keep at least a day's supply of material in a warm spot in the shop, it is mandatory that material being brought in from the yard or an unheated warehouse in the winter be warmed to the above extent before use. A tank with a supply of hot water or a steam coil will warm the material in a short time if it is kept under constant agitation. Under no circumstances should any attempt be made to adjust a material heavy from low temperature with additional reducer or thinner. When the material has warmed, the viscosity will return to normal and the over-thinned mixture will be much too light. Conversely, if provision is made by some such device as a hot water jacket on the supply tank, to apply the material at a slightly elevated temperature, say one hundred degrees, somewhat less thinner will be required with a corresponding gain in flow and body.

Keep Cans Closed

In the event that partially emptied packages are used as storage while the contents are being used, as is common, adequate provision should be made for the complete closure of the container. Much waste is occasioned by thickening of material by solvent loss from improperly closed packages. Heavy materials, especially those of oleo resinous nature such as wood filler, putty and knifing glazes and heavy surfacers will skin or harden on the surface requiring a great deal of skinning off of the surface to obtain fresh material with resultant waste. Such materials should be protected from too free contact with the air, even that occupying the emptied portion of a tight container, with the use of a heavy inner cover which just slips into the container and rests on the surface of the material.

"Will You Pour?"

Few users of finishing materials seem to know how to pour from a square can with a small pouring orifice in the corner. One finishing foreman of our acquaintance made his first act on receiving a new five gallon can of material, that of punching a nail hole in the corner of the top diagonally opposite the pouring spout to admit air for smooth pouring. He thus accomplished at one stroke the ends of ruining the can for any future use and of providing a permanent exposure of the contents of the can. The recommended course is a simple one. Obviously, air must enter the can simultaneously with the emergence of the contained liquid. Turn the can therefore with the pouring spout to the top, with the can on its side and tilt it until the material runs out of the lower half of the pouring orifice. The air enters the upper half at the same time and the stream of liquid is undisturbed by the gurgling of entering air trying to fight its way up through a heavy liquid. It's as simple as that.

Legend has it that once there was a man who wiped off the pouring spout of a can so that the cover, or cap, when replaced would fit as was intended and yet not be cemented to the spout in such a manner as to completely deciminate the disposition of the next user as well as wasting a great deal of time. If there was such a man, and it seems doubtful, the memory of his good deeds has not prevailed widely.

The intelligent and economical storage and handling of finishing materials is much less a matter of elaborate storage facilities or equipment for its handling than a centralization of responsibility for their careful routine dispensing by a single responsible individual. Nowhere else is there more truth in the old adage of "too many cooks—."

Cleanliness, care and systematic attention to a few basic rules as set forth above will pay actual dividends in salvage of lost time, production rates, low rejection and economy of material. Unless every container is very thoroughly agitated, except of course, in the case of clears, drained and rinsed out with an appropriate thinner, the user of the material is not getting what he pays for.

All finishing materials are carefully filtered at the plant of the manufacturer, or supposedly so, as a matter of routine. They are not, however, infallible and accidents and oversights can happen. The custom of straining every material through at least as fine as eighty mesh in the inch is an admirable one and well worth the trouble. Cheese cloth is satisfactory for this purpose as is the washable silk bolting cloth.

Whether your finishing material is raised with chain hoists to drain into gigantic centralized paint system tanks or whether you keep a couple of cans ahead in the corner of the foreman's office: Stir it! Drain it! Strain it! and warm it.

Three Million Seedlings Threatened by Dry Spell

The extended dry spell experienced this spring in western Washington and Oregon is threatening the survival of over three million seedlings set out by the Weyerhaeuser Timber Company, according to Ed Heacox, Weyerhaeuser managing forester.

The seedlings, mainly Douglas fir, were planted in nine of the company's twelve tree farms throughout the western portions of the two states.

"Excessively dry weather increases the threat of forest fires and the accompanying drouth is damaging to the young trees recently planted on our tree farms," said Heacox. It is probable that seedling losses will be higher this year because there has been less rainfall during the critical period immediately following planting than in previous years, he added.

The Weyerhaeuser Timber company has been treating timber as a crop for many years, according to Clyde S. Martin, manager of forestry relations for the firm. The first certified tree farm in the United States was the Clemons Tree Farm in southwest Washington which was sponsored by Weyerhaeuser in 1941. Now there are tree farms in 23 states totalling 17,593,129 acres.

Weather and fire, while perhaps the most destructive, are not the only enemies of the forest. Insects, disease and wild animals all take their toll, according to Martin. Worst offenders in some areas are the bears, who relish the cambium layer between the wood and bark of young trees.

M & M Woodworking Firm Introduces New Door Stock

A specially "stiled" and versatile cupboard door stock is being introduced to the market by M & M Woodworking Company of Portland, Oregon. Made in 7 widths starting at one foot and increasing at 2" intervals to two feet and any length up to eight feet, the stock is ¾ inch thick with patented insert stiles of solid wood on both edges. Matching face veneers cover both faces of the cupboard door stock.

Woods used by M & M for this new stock include redwood, African mahogany, maple, white oak, birch and rotary cut and vertical grain fir.

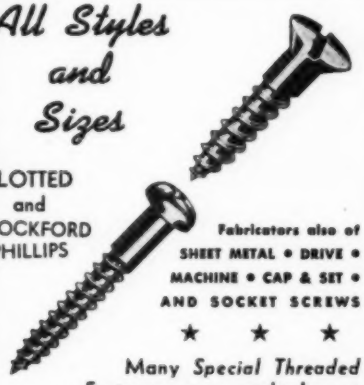
Advantages of this type of cupboard door stock are many, according to the Malarkey firm. It is stable with less tendency to warp. It machines better and can be smoothly lipped and rabbeted, they claim. When the stock is properly finished the stile inserts and the face veneers appear to be one and the same wood—since the solid lumber can be stained to match the face veneers. The stock is made in standard cupboard door widths and needs only to be cut to desired lengths. For intermediate widths the stiles, which are 2½" wide, may be trimmed up to an inch on either side, still leaving sufficient wood to hold butt hinges or for lipping or rabbeting, it is stated.

Poll taker: Does your husband belong to any party, lady?

Lady: Take a good look at me, mister. I'm the party he belongs to.

WOOD SCREWS

All Styles and Sizes



SLOTTED and ROCKFORD PHILLIPS

Fabricators also of SHEET METAL • DRIVE • MACHINE • CAP & SET • AND SOCKET SCREWS

★ ★ ★

Many *Special Threaded Fasteners* are made by us for the wood working industry. Let us help solve your fastener problems. Submit samples for recommendations and quotations.

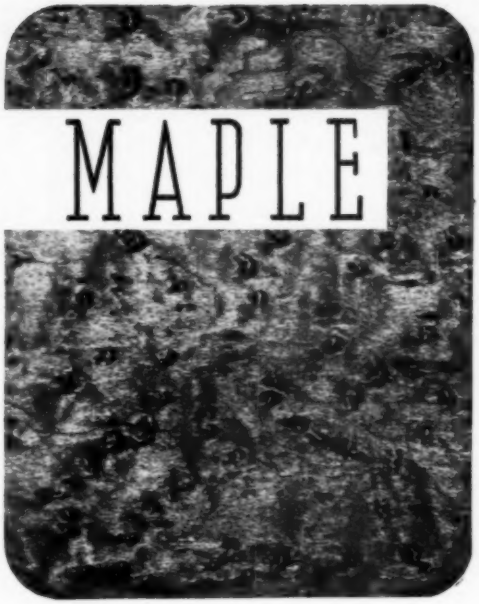
"ROCKFORD" Screw Products Co.
Rockford, Illinois

TELEPHONE DIAL 4-944. TELETYPE RK 89

U.S. MORTISE CHAIN

U.S. CUTTING CHAIN MFG. CO.
BROCKTON 63, MASS.

BIRDS EYE MAPLE



"Memories in maple" are those authentic and artistic reproductions in furniture of that charming era of Colonial splendor which continues to find favor among discriminating buyers.

The quaint loveliness, yet quiet dignity, of the decorative motifs that so dominately characterize Early American furniture is given almost articulate expression with Beveco Birds Eye Maple veneers—the delightfully figured wood that has grown rapidly in popularity in recent years.

Generous samples of Beveco Birds Eye Maple will be gladly sent to alert manufacturers who appreciate the accelerated sales appeal of a wood capable of an almost inexhaustible combination of tints and shades and color variations.

ROTARY CUT - SAWN and SLICED VENEERS
IN ALL
NORTHERN HARDWOODS
PLAIN or FIGURED

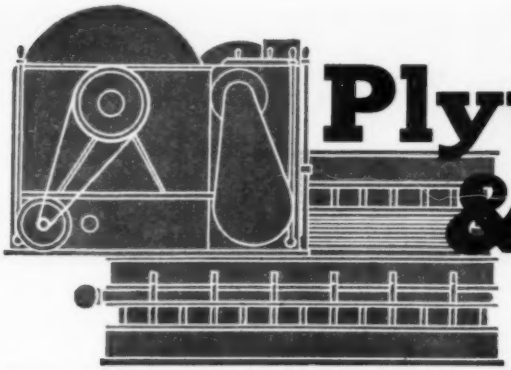
BEVECO VENEERS

May we show you some of the many adaptations of this beautiful wood? We have produced Beveco Birds Eye Maple veneers for many years, and have seen its outstanding success as a distinctive furniture and cabinet wood. Let us hear from you today. Of course there is no obligation.

BIRDS EYE VENEER CO.

SINGLE PLY VENEERS · ALL NORTHERN HARDWOODS

Escanaba, Michigan



Plywood & Veneer

FABRICATION
APPLICATION

The ROUGH DIMENSION DEPARTMENT

The appreciation of the author is expressed to Mr. B. E. Porter, chief engineer of the C. O. Porter Machinery Co., who has supplied the photographs and the basic layouts used in this article.

It is one thing to have up-to-date and efficient woodworking machines, but it is far rarer to find them well arranged for optimum quality, maximum production and high yield. PROFIT vs. LOSS in any wood-working shop has its major test at the rough dimension department, where the rough boards are cut down into the required sizes for further fabrication.

By

Thomas D. Perry

One of the handicaps under which most woodworking shops suffer is the fact that the factory is usually built before the machinery arrangement has been studied out, or unanticipated machines are purchased at a later date, and their proper location is complicated by existing aisles, windows, columns, doors and other structural features that cannot be changed.

From time to time it is worth while to give some thought to an ideal machinery layout and to determine how much improvement can be made toward such an ideal, in view of the inherent handicaps that cannot be altered. Such an evaluation is frequently chastening and always helpful in reaching forward toward better production methods.

A case in question, that is definitely a current day problem everywhere, is the rough dimension department, where the rough lumber is reduced to approximately its eventual sizes. Lumber costs are far above those of the pre-war years and obtainable grades are distinctly lower. Coupled with these problems is that of constant and insistent demand for better and better machine workmanship, leading to a minimum of assembly fitting. Hand work and hand fitting are far too costly of modern day mass production. The best machinery requires the most efficient arrangement to meet the precise and interchangeable standards of

(*Continued on next page*)

FIG. 2. LOOKING ALONG THE CENTRAL CONVEYOR BELT AND INTO THE "SURFACEMASTER."

(*Continued from preceding page*)
modern woodworking.

Lumber Core Production

The machine problems of rough dimensioning for lumber cores are practically the same as those of making solid tops, except in the latter case the raw material is more costly, and careful attention must be paid, usually, to selection for color and grain figure.

No one layout of machinery for this purpose can be ideal for all conditions. Therefore several arrangements are shown in the floor plans of Fig. 1, divided into the primary operation of cutting to length and the secondary phase of surfacing and ripping to width. The cutoff operations are detailed in layouts I, II, III and IV, while the surfacing and ripping steps

FIG. 4. UNDERSIDE VIEW OF FINGER FEED PRESSURE MECHANISM. Stock Moves to the right.

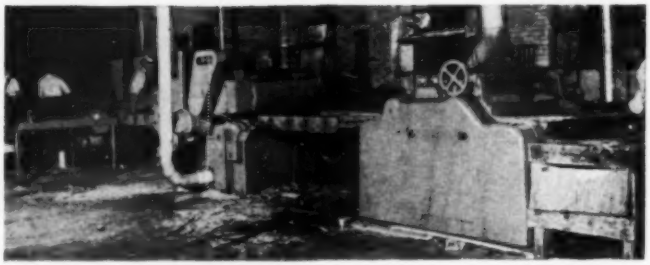


FIG. 3. TANDEM SINGLE SURFACER SETUP.
Cutoff saws at left, with stock moving toward the reader's right.

are outlined in V and VI. There can be any combination of I, II, III, and IV (on the left) with V and VI (on the right). The choice of combinations will depend on various factors, among them the available grades of lumber, the required volume of production and the quality specified for the ultimate product.

Where lumber is relatively narrow and free from warp and twist, the choice will rest between layouts I and II, depending on volume and size of cuttings. Layout III, with an intermediate rip sawing after cross cutting and before planing, is particularly useful in the case of wide and/or warped lumber, which will not plane out and leave enough thicknes for final surfacing after edge gluing; or in the case of knotty lumber which requires that knots and other defects be ripped out before planing. In such instances the conservation of stock may more than offset the cost of the intermediate operation.

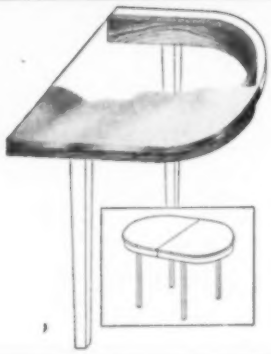
Layout IV introduces a rough planing of the boards before cross cutting, to permit selection for color or quality. This rough planing, single or double, will not take out "wind," and at best will cut mostly at the thick spots, so that sufficient stock can be left for the later surfacings. This layout is frequently used for solid tops, where emphasis is more on appearance than on utility.

The right hand sketches, including the equipment for surfacing and ripping, V and VI, are shown both in direct and reversed arrangements, since factory floor space often determines this feature, but it is otherwise unimportant.

Lumber Lifts

Lumber lifts, or hoists, shown in I, II, III and IV, are quite essential to maintain the top of the kiln car load at a convenient working height and eliminate the clumsy handling of long heavy boards. They may be screw operated (Leitelt Iron Works) (B. M. Root Co.) or hydraulic plunger type (Rotary Life Co.)

In many cases special conveyors are provided to return the stickers to the kiln or to a point where they can be accumulated for transfer to the kiln loading sta-



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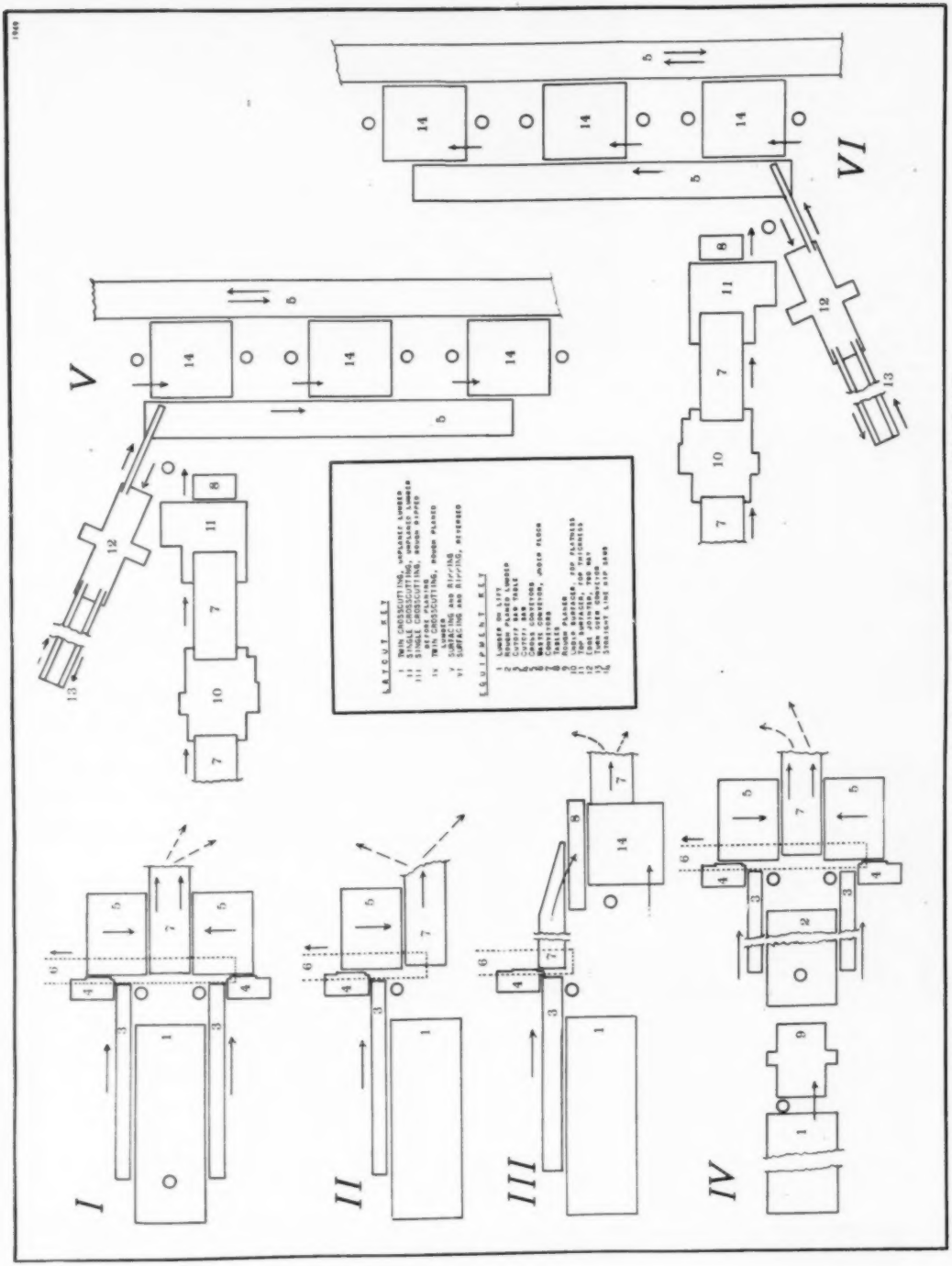


FIG. 1. EQUIPMENT LAYOUTS FOR ROUGH DIMENSION DEPARTMENT.

(*Continued from page 32*)
tion in the lumber yard.

Cross Cutting Saws

The boards are turned over from the top layer of lumber on the lift, which is kept at the most convenient level for this purpose, to the cross cutter tables, which are equipped with automatic length guages (Tannewitz) and idling rollers. The waste cuttings drop to a subfloor conveyor leading to the hog.

Waste Disposal

Conveyors for waste and scraps are shown in I, II, III and IV, located directly below the cross cut saws and under the floor, so that the time of the sawyer is conserved by this automatic waste removal device. Similar waste conveyors can be located beneath the rip saws, although they may encourage the discarding of waste rippings that could be re-crosscut and utilized for shorter lengths. Such rip saw waste conveyors are not indicated in the layouts, since the preponderance of opinion is against them.

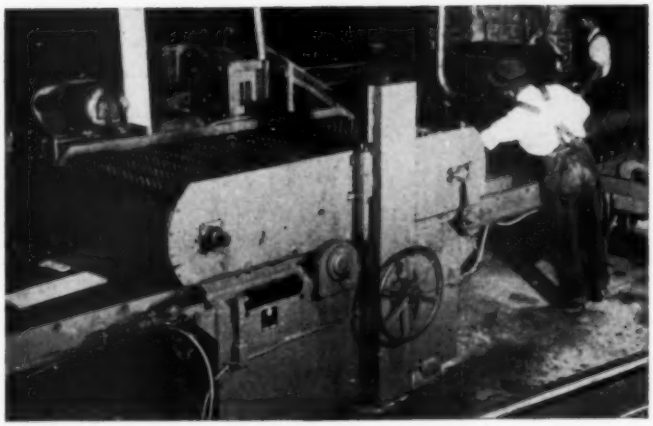


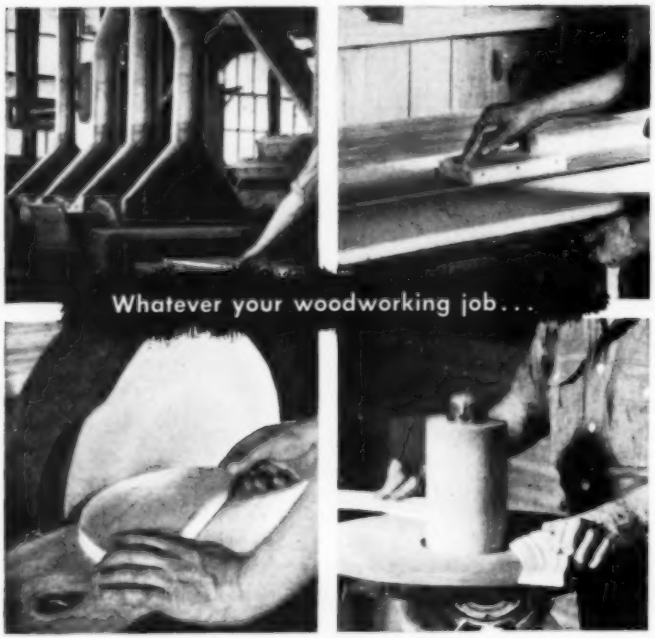
FIG. 5. SIDE VIEW OF "SURFACEMASTER."

Conveyorizing

Automatic conveyors are extensively used in these layouts, to connect various machines and eliminate hand feeding and off bearing, both quite unstimulating operations than can be done better mechanically. These conveyors are independent motor driven units, of any desired width or length, equipped with live rollers, or belts, all with independent start and stop buttons to provide for emergencies.

A view of two types of conveyors is shown in Fig. 2, where the photographer stood on the lumber lift in layout I (Fig. 1). The two men back to the camera are cross cut sawyers, and their product moves on to the cross conveyors beyond them. These are a series of narrow cross belts delivering to the wide control belt, which leads to the first surfacer. The suspended fence hung above this central belt is a bumper to segregate the boards from each cross cut saw on their way to the planer, which is shown at rear center. The boy facing the camera is a sawyer's helper, removing kiln stickers and placing boards immediately adjacent to the roller tables at each cut off saw.

Such conveyors, as are shown,



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do away entirely with much piling and repiling on factory trucks or skids, which inevitably clutter up any cutting department and cause many delays from poor piling.

Surfacers or Planers

It is important that single surfacers be located in tandem, since double surfacers are distinctly lacking in capacity to take out warp and wind, and thus provide a true flat under surface for accurate and square edge jointing. The first of the two surfacers, an undercut type, should have finger feed pressure to keep the board from rocking during planing, and thus provide a flat under surface as a guide to the second or top surfacing. Types of such planers are the Oliver "Straitplane" and the Porter "Surfacemaster."

This tandem arrangement is shown in Fig. 3, with a short infeed conveyor from the cross cut saws to the first surfacer, and another intermediate conveyor between the two surfacers. The finger feed of the first surfacer ("Surfacemaster") is shown in Fig. 4, raised above its normal operating position. The rows of fingers or spikes are free to turn, have a slight angling position in the direction of the feed and are under individual coiled spring tension to keep the board from rocking while it is in the rut. Such a feeding device is the only known method of producing a true flat surface on a board that is "in wind," since roller feed pressure is likely to perpetuate the twist, and as a result, prevent the later cutting of a true square edge.

Still another view of this "Surfacemaster" is in Fig. 5, where the feed fingers are shown in their upper return travel level. The hand wheel in the foreground raises the finger feed attachment to the position shown in Fig. 4 to permit easy access to the cutter shaft.

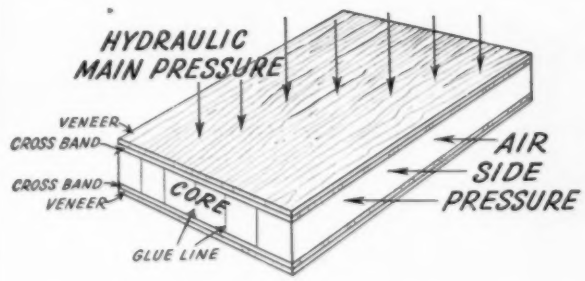
"Free" Jointing

The off bearer at the second surfacer, a normal top side planer, selects all pieces with a sufficiently "good" edge to be squared up with a ⅛", or less, allowance for a rotary cut joint. These are placed in the two-way jointer, which joints the lower edge and forwards them to a turn-over conveyor, which reverses the edges and exposes the opposite edge for similar jointing on the return trip. The jointed piece then automatically drops on the conveyor belt that serves the rip saws, for possible ripping or for the removal of a remaining defective edge. Since this jointing of both edges is wholly automatic, after feeding into the jointer, it has been graphically called a "free ride," since no manpower is required. In many cases it will reduce the work required of the rip saws by 25% to 50%. If a two-way jointer is not available, this "free" ride can be eliminated, but it will throw a heavier burden on the battery of rip saws, and may slightly reduce the net yield of useful lumber.

Straight Line Rip Saws

It is estimated that some 3% to 6% of the width of the strip can be saved if a satisfactory and gluable joint can be produced on a straight line rip saw. While a rotary cutter head can be set to cut substantially less than ⅛", the law of averages in these layouts requires approximately such an allowance.

(*Continued on next page*)



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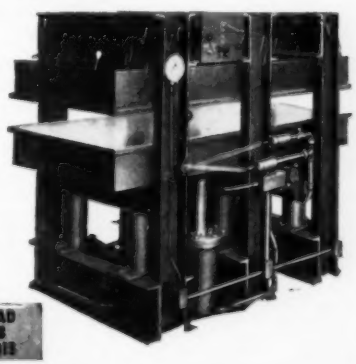

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(*Continued from preceding page*)

Most authorities claim that a jointed edge makes for better gluing, but they are equally frank in admitting that a properly sawn joint is adequate for most purposes. It is true that a sawn joint requires higher pressures in gluing and that the slight roughness of the sawn edge actually takes more glue from the spreader roll, but these features are more than off-set by the saving in lumber. In mixed, or combined types of edge joints, the glue spread and the pressure requirements of an all sawn joint should be allowed.

In the equipment layouts shown in Fig. 1, both sawn joints and rotary cutter joints are used without any attempt to combine like types in a single joint. The results from the use of random combinations is proving to be satisfactory and the plan has been widely adopted. Perhaps the best explanation of the economy resulting therefrom is that the rotary cutter edge can be made with a maximum of ⅛" waste, while a sawn edge has a minimum allowance of ⅛", due to the fact that a rip saw is likely to run out of "true" when it is half in and half out of the wood. If the entire width of the saw is cutting, and the kerf has a minimum of about ⅛", true square edges can be obtained.

There is some argument among woodworkers whether a top cutting or bottom cutting rip saw is preferable, and each method has its ardent advocates. In the last analysis it is a problem of a true running saw, well jointed, cutting through a strip of lumber that is rigidly held flat, without any rocking on the feed chains.

While three straight line rip saws are indicated in V and VI of Fig. 1, this number may vary up or down with the volume and average widths or strips. Few factories will allow wider than 4" and the writer prefers a maximum of 3", with a careful reversal of any strips that have been sawn apart. This procedure is particularly effective in reducing tendencies to subsequent warping to a minimum.

The conveyor belt away from the battery of rip saws can be run in either direction, depending on the location of the matching saw or the glue clamp, whichever is in use.

General Considerations

The layouts shown in Fig. 1 in their various combinations, offer much food for serious thought. Only those who are building a new factory can hope to realize them in their entirety. However, the fundamentals of each step in the process represent the best practice which has been adequately demonstrated by many woodworkers. Partial improvements are almost always possible in any set-up.

A caution should be expressed about the length of the conveyors which should always be on the long, rather than on the short side. This is particularly true where the flow direction is changed, as in cross belts, where clearances are required between succeeding pieces.

The complete conveyorizing of these layouts gives the advantage of "pace setting," which keeps all operators and machines at a standard rate of progress. Too fast a pace will inevitably cause pile-ups. An intelligent basis for the pace is the lineal feet of cut, not the square footage produced, which will vary with the grade

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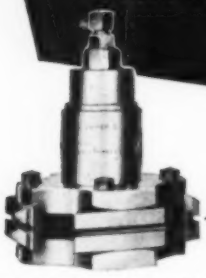

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of lumber and the widths of the individual strips.

It is the hope of the writer that a study of the data presented will stimulate interest in better processing in the rough dimension departments of American woodworking shops.

Plan to Substitute Wood For Steel In India

Dr. S. Kamesam, deputed by the India Government to prepare a scheme for using treated timber in place of steel in engineering constructions, has completed the preliminary work.

Outlining his plan in a recent press interview Dr. Kamesam, former Timber Development officer and Wood Preservation expert, said the scheme envisaged inauguration of a central timber and bamboo institute in Bangalore, which would not only standardize the designs of timber engineering structures but also of timber engineering and wood preservation factories and their operation technique.

The institute will train technical personnel for erecting and managing at least a dozen factories in the country.

A research department will enable the standardization, pre-fabrication and mass production of building and structural components. All waste wood, including chips and saw dust, will be converted in factories into compressed hard board which will be insect and water proof. This together with a certain technique of bamboo construction will be invaluable for solving the problem of low cost housing in the country. The scheme will cost the Government $6 million in the beginning and $420,000 annually.

Timber structures corresponding to 100,000 tons of steel annually will be the target which can progressively be increased to double this quantity. Every 100,000 tons of steel saved will mean a saving of $18 million worth of foreign exchange.

New Plywood Panel Announced

Development and production of a new, medium-priced, hardwood plywood panel for use by home owners and cabinet makers has been announced by the United States Plywood Corp.

The result of many years of research, the manufacturer thinks highly enough of its worth to have erected a large new plant at Orangeburg, S. C., for its manufacture.

French Plywood Output Tops 1938

Paris, France — The French plywood industry, hard hit by World War II, is now back on its feet and producing more than the best pre-war year, 1938. Last year's output totaled 91,000 cubic meters, surpassing earlier industry estimates of 80,000.

Although the industry has a potential output of 135,000 to 150,000 cubic meters per year, raw material shortages are expected to prevent the realization of these figures for several years to come. Present output, however, is sufficient to enable France to export to hard currency areas as well as to cover her own internal requirements.

Handle Co. to Make Two New Products

"The Hickory Handle Company of Batesburg, S.C., will produce two new products," said J. C. Blakeney, president. "C. H. Schaeffer, vice president of our Company, developed the design of the barrel back lawn and porch chair which he made and placed in each of the state parks of South Carolina, when he was Associate State Forester. We will manufacture this chair in order that it will be available to the general public, which has found it so comfortable. We have named the chair 'Solid Southern Comfort' and each one shall be so marked with this trade name and numbered."

"The second activity is the manufacturing of the cut-in letter type signs which Mr. Schaeffer has made for use in the state parks, state forests, for each of the fire towers, and the vocational agricultural school forests of South Carolina."

"These signs will be made, in order, from durable native woods with natural finished backgrounds and cut-in letters. Samples of the chairs and signs are on display at the company plant at Batesburg."

Building Costs Turn Up

After several months of slow decline, construction costs appear to have turned upward again and there were signs of stability in lumber prices after an extended decline, according to the Engineering News-Record.

The Engineering News-Record construction cost index for June rose 1.68 points over the previous month to 473.78.

Shingle Mill Razed by Fire

Hoquiam, Wash. — Fire of undetermined origin razed the main plant of the Robert Gray Shingle Company, here June 13. Damage was estimated by George L. Pauze, owner-manager, at $150,000.

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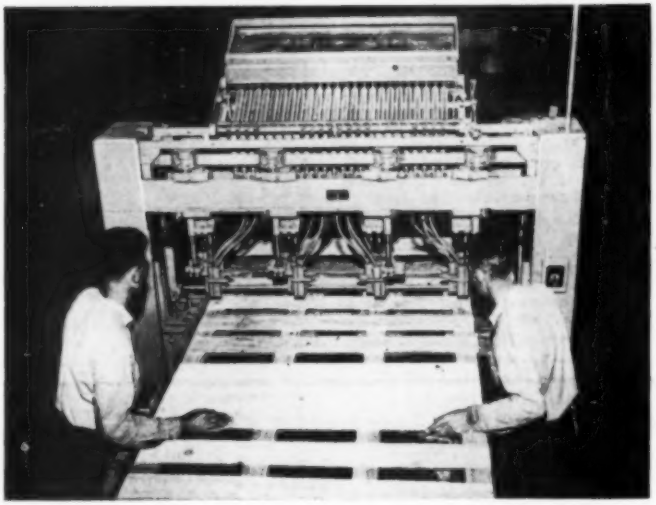
Versatile Nailing Machine Introduced By Food Machinery Co.



First of the new 24-nail drive Commercial Nailing Machines of Food Machinery and Chemical Corporation, Riverside, California, is shown in operation at the Fullerton, California, plant of the Mississippi Glass Company. The design of this flat nailing and clinching machine allows it to be tailored to meet many exact wood fabrication requirements.

Such large wooden assemblies as pallets and shipping crates can now be made with production line efficiency by the versatile, new Commercial Nailing Machine of Food Machinery and Chemical Corporation, Riverside, California. The design of this 24-nail drive, flat nailing and clinching machine allows it to be tailored to meet many exact wood fabricating requirements.

One of the first of these machines is now being used at the Fullerton, California, plant of the Mississippi Glass Company for making sheet-glass shipping crates in various sizes. The fact that the machine can be quickly changed from one operation to another is of special value to this plant; the size of the glass to be shipped determines the size of the crate to be made. Crates made are fabricated of horizontal rails, ranging from 140" to 152", and of vertical slats, ranging from 24" to 53". The slats are spaced at approximately 4" intervals along the rails.

Made to operate at 120 strokes per minute, the actual speed of the new commercial nailing machine is dependent on the skill of the operator. It is designed to

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Oversize 20" x 20" highly polished, cast iron work table. Two-way tilt to 45°.

The reciprocating action is so smooth, the finest fret blades have long life. The drive mechanism is absolutely the strongest used on any 24" jig saw. Moving parts and ball-bearing crankshaft are fully splash-lubricated. 50% longer blade-stroke cuts thicker stock faster.

Only 24" jig saw capable of using any blades 5" to 9" long. Many times the capacity and versatility of others. Blades may be turned 90° for ripping long stock.
Capacities: Under hold-down—5". Blade to frame—24". Stroke—1½".
Blade guides above and below table. Overall: 39" high; 20" wide; 38" deep.

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drive up to 24 nails in practically any nailing pattern. The machine is built in various widths to fit the particular job; 72" is the maximum width. Using 3 to 10 penny nails, the machine includes an adjustable nail feed as standard equipment. A quick-change driving head arrangement and an adjustable height table mounting frame are attachments available to fit the machine to the specific job. The machine can also be supplied with an imbedded nail point clinching device which is custom-made to fit the needs of each special application.

The FMC industrial nailing machine, Style No. 366000, is 79" (max.) wide by 49" deep by 8 feet high. Its net weight, without table, is 2100 lbs. The machine is equipped with a 5 H.P., 1800 R.P.M. motor in any voltage or cycle required.

W. A. Joseph Joins Somerville-McGinn

W. A. Joseph

Mr. L. L. Somerville of the Somerville-Mc Ginn Lumber Co. of Chicago announces that their sales staff has been augmented by Mr. W. A. Joseph. During the past two years Mr. Joseph has been sales manager of the Tygh Valley Lumber Co. and previously was with the Weyerhauser Sales Co., for twenty years.

In his previous positions Mr. Joseph has handled the sales of lumber specialties as well as pine and fir lumber.

M & M Woodworking Co. Opens Memphis Sales Branch

Reed P. Morse, M & M Woodworking Company's southern sales representative since 1933, has established a new branch sales office in Memphis, it is announced by President Herbert Malarkey. Increased service to building distributors and dealers in 10 southern states will result, it was stated. Morse will retain the headquarters office set up in Miami at 602 Chamber of Commerce Building, Miami. Address of new Memphis office is 1115 Three Sisters Building.

Morse is sales representative for Florida, Georgia, North and South Carolina, Virginia, Tennessee, Alabama, Mississippi, Louisiana and Texas. He was formerly with the Southern Sash & Door Jobbers Association.

Wood Industry Brings Dying Town to Life

The little town of Chassell of Michigan's upper peninsula which has been dying a slow death for lack of industry suddenly came to life recently when Kenneth and John Hamer, sons of the pioneer wood industrialists and with similar faith in this area, opened a box crate factory here.

The Hamer brothers determined that a real market existed for boxes and pre-cut crating materials. They built a factory, sent men into the woods to cut needed lumber, which, until recently, was regarded as a meager source. Nature has been busy replacing some of the old forest growth which man had harvested—not the great pine, but huge quantities of fast growing aspen and other so-called inferior species had come to marketable size while Chassell was presumably dying.

At present the Hamer company has 35 men employed and expects to increase its payroll to employ 75 persons within a short time. The local sawmill which has been virtually idle before the Hamer plant was established is now going full blast again. The new woodworking industry will bring to the revived village an estimated $420,000 worth of annual business.

The Hamer boys have breathed life into a dying village and made a number of people happy. For that they may be proud.

American Fork & Hoe Co. Appoints

Memphis, Tenn.—Henry Alston, plant manager for American Fork & Hoe Company, Southern Works, 253 West Colorado street, has been promoted to director of timber and handle operations for the company and has been transferred to the company's headquarters in Cleveland, Ohio. Albert Austin, production manager, has been promoted to plant manager here. Effective July 1, 1949, the American Fork & Hoe Company, changed its name to True Temper Corporation.

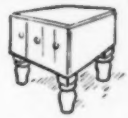
The right glue for the job

For

BUTCHER BLOCKS

Use NCS No. 9 Casein Glue

NCS No. 9 Casein Glue is unequaled for hardwood gluing—oak, beech, birch, maple. For edge gluing ... for heavy veneering.



National Casein's No. 9 is used by leading manufacturers of Hardwood Butcher Blocks, Firedoors, Stair Treads, Outside Doors and General Millwork. It is water resistant—easy on knives—fast setting—has long working life.

Most soft woods are easy! Joint work with hardwoods requires a specially "sturdy" glue. Take butcher blocks, for example. One leading manufacturer, after using National Casein's No. 9, even recommended it to his competitors.

NCS No. 10 Joint Glue is another fast-setting adhesive, for heavy veneering and joint work.

National Casein Sales manufactures a complete line of casein glues, liquid ureas—with a variety of catalysts to fit your needs. "D R" (powdered urea resin), resorcinal resins—in fact, a glue (casein or resin) for practically every adhesive job. Outline your gluing project, and National Casein will recommend the adhesive to do it correctly. No cost or obligation.

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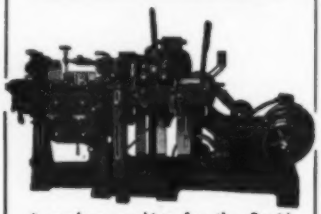
HERMANCE NO. 60 HIGHSPEED BALL BEARING MOULDER



A modern machine for the Rapid and Accurate production of Small Mouldings or for four side planing. Ideal for detail work. Quick to set up. High spindle speed, 5400 RPM, means fine one-knife finish at fast feeds. Handles stock from the smallest to 6" wide and 3" thick; bed drops 16" for running wide stock on edge. For fast feeds it can be furnished with four knife heads, knife jointers, electric grinder and automatic hopper feed. The low initial cost and many advantages of this machine will appeal to you.

Write for Detailed Bulletin

HERMANCE
MACHINE COMPANY
Williamsport, Pa.

Report New Wet Wood Burning Developments at ASME Semi-Annual Meet

San Francisco—Simplified combustion systems, with high steam capacities and automatic controls, have been developed for burning wet wood, Otto de Lorenzi, director of education for Combustion Engineering - Superheater, Inc., New York, said at the semi-annual meeting of The American Society of Mechanical Engineers here. The generally accepted burner of wet wood refuse has been a two-stage furnace that required many manual adjustments, said Mr. de Lorenzi, who is an ASME Fellow.

The new type single stage furnaces, using both underfeed and spreader firing, have been operated successfully, he told engineers at ASME meeting headquarters in the University of California Extension Building, and automatic controls are easily applied to them.

"Continuing high level costs of standard fuels, such as coal, oil and natural gas, has stimulated the development of improved burning methods and furnace designs for use with many so-called refuse fuels," Mr. de Lorenzi pointed out. "In a large number of industries the quantity of by-product fuels available is sufficient to furnish part or all of the steam needed for process work and power generation."

Wet Wood Is Plentiful

Probably the most widely available refuse fuel is some form of wet wood, a large-quantity by-product to the manufacturer of lumber, pulp and naval stores, he continued. Each of these new industries, however, has its own specific combustion problems when wet wood is used for steam generation, he said, because each uses a different type of wet wood.

Lumber industries use a combination of sawdust, shavings, bark and other wood waste, for example, while pulp and paper industries use bark, and naval stores industries use "spent-wood" chips from which the pine pitch and resin have been extracted. Developments in wet wood burning included improvements in utilization of all three types of fuel, Mr. de Lorenzi said.

Lumber Installations

"Typical installations used by lumber industries operate quite successfully, but are subject to frequent service interruptions for purposes of cleaning slag accumulations, and refractory or grate renewals," Mr. de Lorenzi said. "Furthermore, because a large percentage of the air for combustion is non-controllable, and the fuel supply cannot be closely regulated, it becomes necessary to make continual changes through manual adjustments to produce acceptable operating results."

A considerable amount of experimental work recently completed with a new design shows it is possible to simplify the furnace arrangement, reduce the width of the boiler furnace and bring many previously non-controllable factors of older designs to a point where automatic regulation is possible, he reported.

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Designed specifically for precision grinding of knives, bits and carbide cutters for all types of woodworking cutter heads.

- Grinds cutters while in the head.
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- Grinds straight knives in special fixture.
- Grinds carbide-tipped cutters, with diamond-loaded wheel.

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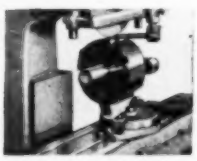

Grinding knives in tenon head.

CUTTER HEADS BADGER KNIVES

Engineers to the Woodworking Industry

WISCONSIN KNIFE WORKS

BELOIT, WISCONSIN

Also the amount of steam produced per foot of width with the new unit is greater than with previous designs, resulting in a highly efficient, compact, automatically regulated unit capable of operating for long continuous periods between maintenance or cleaning outages, Mr. de Lorenzi said.

Bark Drying

In the pulp and paper industries the big problem has been drying bark—often 80 percent moisture—to a point where it will burn, Mr. de Lorenzi continued. This usually is accomplished by using a two-stage Dutch oven furnace or a two-stage furnace with either flat or sloping grates.

"Newer arrangements, however, have been developed to simplify designs and, simultaneously, provide for more effective firing control," Mr. de Lorenzi told the engineers. "In these arrangements, spreader stoker firing, made possible through improved sizing of the wood refuse, has been the principal contributing factor. The single-stage water-cooled furnace is used for the wood, as well as supplementary fuels (used to maintain an even production of steam). Air supply and fuel feed may be automatically controlled to maintain consistently uniform operating results. High capacity per foot of furnace width and instant response to changes in steam demand are obtainable without apparent effort."

"Spent-Wood" Furnaces

Accepted furnace design for "spent-wood" refuse from naval stores plants is the sloping grate type having relatively low capacity and requiring considerable manual labor for sand and char removal, Mr. de Lorenzi continued. It also is extremely sluggish in response to the changes in steam demand, he pointed out.

"Because of these, as well as many other adverse characteristics, a steam generating unit incorporating a number of new furnace features has been tested," he said. "Performance exceeded predictions in every respect and accumulated operating experience, together with recorded data, provide a basis for many design improvements."

The unit tested consists essentially of a tall water-cooled single stage furnace, a two-drum bent-tube boiler and a tubular air heater, he said. Steam producing capacity of this unit is a great improvement over that of the sloping grate units.

Rez Wood Sealer

St. Louis, Mo.—Uses for and methods of applying Rez, Monsanto Chemical Company's clear, synthetic resin sealer, are detailed in a report now available from the company.

Developed specifically as a wood sealer it is claimed Rez seals wood cells against the entry of moisture by forming a hard penetrating film across the tiny aperatures in the cells.

In addition to making wood dimensionally stable, minimizing grain raise and promoting a uniform finish, Rez is said to result in less absorption of stain, varnish, paint or enamel. Many softwoods conditioned with Rez will take a finish equal to that of expensive hardwoods. Other suggested applications and instructions are included in the eight-page report.

Kittinger Co. Holds Annual Employee Party

Buffalo, N. Y.—The Kittinger Co. Inc., furniture manufacturer, held its annual party for employes in the plant courtyard. Spencer Kittinger, president, and Fred J. Batson, executive vice president, distributed service pins to veteran employes.

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Haskelite Corporation Plant Tuned to Postwar Sales

For the Haskelite Manufacturing corporation, Grand Rapids (Mich.), discovery and extensive use of many new plywood and plymetal products in the last ten years have augmented sales from $371,000 in 1938 to $6,500,000 last year. Which, incidentally, is a remarkable showing.

In 1943, however, the peak was reached. That was when a $12,000,000 business volume was recorded. Aircraft plywood, bearing block metal, PT-boat hull plywood and other military material which utilize the firm's wood and wood-metal products required a peak employment of 1,375 persons.

Aircraft plywood production maintained a top spot in Haskelite's production from 1938. Haskelite produced plywood for England's DeHavilland "Mosquito" bomber. This was followed by production for American gliders and cargo carriers.

Concentrate on Consumer Needs After the War

The anticipated postwar boom in small airplanes did not come through as expected, and aircraft plywood production fell. This, however, did not seem to worry executive heads of the Haskelite corporation. They charted their production for the consumer market to supplement industrial products which were developed before the war. Today the company employes 458 persons, almost double the employment of 1938.

Topping the list of consumer products are wall boards and block flooring, the latter having been developed in 1939 and stopped in 1940 to make way for production of war material.

Approximately 50 per cent of the firm's output of a combination wood-metal panel is used in railroad coaches for durability and lightness. The other 50 per cent is used primarily for industrial purposes.

For wartime aircraft plywood, mahogany and walnut were used considerably by the firm. Oak, for flooring, has proved a best seller. For other purposes, the Grand Rapids plant uses a lot of poplar and gum wood, and a small amount of birch.

Food service trays, a Haskelite item, brought in $18,000 in 1937. Last year it grossed $700,000 alone. Fiberglass was developed in the war years for aircraft use and is being used now in molded boat hulls. A lightweight insulator was developed for aircraft here. Haskelite is proud of its continuous research and engineering to design new products and to improve its established lines.

The plant at 701 Ann street, NW., Grand Rapids, was built in 1917 when Henry Haskell, a Ludington (Mich.) carom board maker who had entered the aircraft plywood field there, established his new plant here. In its first year in Grand Rapids the firm employed 150 persons.

A blood albumen glue which was virtually waterproof was developed here and used in the firm's World War I plywood. Later the late George Meyercord, sr., a well-known Chicago businessman, joined Haskell.

Lindbergh Plane Supplied by Firm

The corporation's business fell off after World War I, but was kept alive by manufacturing of automobile and street car roof panels and other civilian needs. The firm then manufactured industrial goods chiefly until the World War II boom.

First major aircraft fame accorded the plant's plywood was that it was used in the construction of Lindbergh's New York-to-Paris "Spirit of St. Louis."

George Meyercord, jr., assumed presidency of the firm when his father died in 1941. Paul Moore took over the top position in March, 1945. George H. Redlin, present president of the firm, took office last January. In 1942 the original plant was supplemented by plant No. 2, and the present office building in 1943.

Haskelite makes plywood in Grand Rapids, and also holds the right to purchase softwood plywood from a California firm. The Grand Rapids plant of the Haskelite corporation has offices in New York City, Philadelphia, Detroit, Chicago, St. Louis and Los Angeles.

It may be an inspiration to other wood products manufacturing firms to note that Haskelite, when its industrial plywood sales fell off, set out and acquired business in the consumer field, to keep a large plant operating profitably.

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Binks spray finishing equipment and methods will help you cut finishing costs . . . yet maintain or improve the quality of your finishes. Better finishes are obtained because of the watch-like precision which goes into the manufacture of all Binks spray guns. Hundreds of nozzle combinations assure you of just the right gun for your particular finish.

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New Method of Laying Maple Flooring

A workman is shown above nailing the surface maple flooring to the plank subbase as a new floor is being installed in a southern textile mill. In this project, a new procedure was used in which the subbase planking was cemented directly to the concrete without use of sleepers. A special Armstrong Cork Company adhesive is used to cement the subbase planking to the concrete.

Glued Timber Standards Due For Industry

Portland, Ore.—Six Portlanders left recently for the U. S. forest products laboratory at Madison, Wis., to collaborate with laboratory officials and leading industry spokesmen on establishing standards for glued laminated structural timbers.

They are T. C. Combs, vice-president in charge of sales for Timber Structures, Inc.; T. K. May, technical director of the West Coast Lumbermen's association; Robert Eby, assistant to May; Verne Ketchum, Timber Structures chief engineer; A. C. Knauss, technologist, Pacific Northwest forest and range experiment station, and Dale Swanson of WCLA.

It is expected the conference will be followed by publication of strength, grading and design specifications for glued laminated timbers such as now are available for sawn timbers, according to Combs.

Publication of such standards will be the result of 10 years of work at the laboratory and in the field.

Timber Structures is a leading U. S fabricator of glued laminated structures with a 21-acre headquarters plant in Portland, smaller plants in Eugene and Oakland and offices in major cities.

Three of the Portlanders are members of the structural design and technical committee of the department of commerce and will remain in Madison for a meeting of this committee.

Graduate 48 Inspectors

Memphis, Tenn. — Commencement exercises of the National Hardwood Lumber Inspection Training School were held at Hotel Peabody on July 14. Forty-eight students from many sections of the United States and Canada were graduated.

From the Abilene, Tex., Reporter-News: "$10 reward for south side apartment. Large enough to keep young wife from going home to mother. Small enough to keep mother from coming here."

McCleary Concern Nears Capacity

McCleary, Wash.—Approximately 110 men laid off in the cutting department of the Simpson Logging company plant two weeks ago were back at work recently, according to Arne Gabrielson, personnel manager at the McCleary office of the firm.

An additional 175 returned to work later as the door plant resumes near-capacity operation, Gabrielson said. The veneer plant continued to operate during the period of inventory adjustments in the other departments.

Total number in all plants will be slightly less than the previous peak of more than 600 workers, Gabrielson said.

Forest "Nursery Link"

Sweet Home, Ore.—This little sawmill town is sitting in one of the largest living forests and on top of one of the oldest and largest petrified forests.

Some scientists believe the fossil forest comprises the "missing link" between the very ancient petrified forests and the better-known miocene forests of Oregon and Washington.

The ancient forest now is solid agate and is computed to be some 50,000,000 years old, while the living forest which surrounds the town is not more than 200 years old.

Buys Pluswood Plant

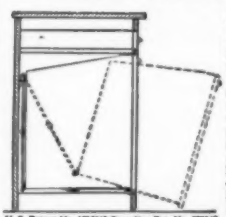
Oshkosh, Wis.—Pluswood, Inc., local plywood plant which during the war supplied panels for England's aircraft, has been sold for $125,000 to Abraham Rochlin, North Carolina veneer plant operator.

The plant, ordinarily employing 400-500 persons, has been closed down for several months. Rochlin said he has no immediate plans, but hoped to have the plywood plant operating in "three to six months." Rochlin operates mills in Statesville and Maysville, N. C., and Charleston, S. C.

Forestry Resources Bill

Washington—The House approved and sent to the White House a bill authorizing expenditure of another $4,500,000 to complete a survey of the nation's forestry resources. This will bring the total cash of the survey to $11 million.

"SLIDEWELL" BIN SWING



U. S. Patent No. 1716448 Canadian Pat. No. 398642 Other Patents Applied For

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By Andrew Wood and Thomas Linn

A comprehensive book which gives even the reader a complete picture of what plywood is and does.

It will prove of great interest not only to manufacturers and users but also to agents and importers of plywood, as well as architects looking for the best medium for carrying out their designs and wishing to feel confidence in the materials they recommend to their clients.

It is profusely illustrated with original photographs illustrating the many varieties of plywood and its most useful applications.

Chapters on historical development; physical properties; manufacture (cutting, gluing, pressing); laminboards; grading, testing, packing, storing; wall panelling; application (very complete by products); appendix, (terms, late developments, charts of woods, etc.)

472 Pages—Fully Illustrated—$4.00.

Wood Technology

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Rich in new data, this is the first book to treat every significant feature of that essential material—Wood. By a world distinguished authority, it is the only comprehensive study of the subject written in the English language.

Authoritatively, yet simply, the author discusses all phases and processes and the many uses of Wood. Significant material is provided on the mechanical, physical and chemical properties and on structure. Wood Anatomy, Wood Physiology, Timber Physics, Wood Chemistry and Timber Mechanics are among the classifications treated.

An indispensible identification key is featured in the abundant original material, numerous useful tables are provided in the appendix and references for more intensive reading on specific wood subjects are given at chapter endings. Excellently written and conveniently organized, this book is profusely illustrated with photographs and photomicrographs.

Unquestionably accurate, highly practical and readable, "Wood Technology" is a must for everyone concerned with the processing or use of Wood. Manufacturers, designers, engineers, woodworkers, lumbermen, foresters, craftsmen, instructors and students will welcome this superb work. Price $4.00 post paid.

Modern Plywood

By Thomas D. Perry

This book suggests new and less expensive methods of manufacture and construction; new products. Recent striking advances in the manufacture of Plywood have so broadened its use that a sound knowledge of this versatile material is invaluable to designers and executives in industries of all types.

Both manufacture and utilization are for the first time treated comprehensively and with authority in this, the only book published on Plywood in more than a decade. Techniques developed since the use of synthetic resin adhesives are fully and effectively described and brief, clear material is given on the earlier method of manufacture, which still has a definite place in the industry.

Valuably suggestive, the hundreds of vital uses of Plywood are conveniently classified into types such as Aircraft Construction, Furniture and the Allied Industries, Boats and Ships, Containers and Shooks, Construction and Building, Sporting Goods, Trunks and Baggage, etc. This material is indispensable to both new and established users of Plywood. Tabular matter hitherto unavailable or difficult to obtain is provided. Scores of pictures, charts, tables and drawings. Price $5.00 post paid.

Air Seasoning and Kiln Drying of Wood

By Hiram L. Henderson

This valuable book is extremely useful to the kiln foreman, woodshop foreman, sawmill superintendent, the mill owner or manager of a large or small factory where wood is converted from raw material into semi-finished or completely finished form. It is written especially for the use of sawmills, veneer mills, cooperage plants, and woodworking factories, where the proper solution of drying problems is of immeasurable value. The book contains 352 pages packed full of useful information on drying. It contains 222 clear illustrations, showing every phase of air seasoning and kiln drying of wood in every form. Price $4.75 postpaid.

Veneers and Plywood

By Knight & Wulpi

A very complete and authentic book on the history, application and manufacture of veneers and plywood. Published in 1927 it does not contain developments in the industry since that time, but for completeness and authenticity of subject material up to that date it is unsurpassed. An excellent reference book and a valuable addition to your wood products library. Profusely illustrated. 372 pages. Out of print and only a few dozen available at $5.00 per copy post paid.

Machine Woodworking

By Herman Hjorth

An unusually complete book which describes all the common types of woodworking machines without favoring any particular make. Included are detailed descriptions of all features of common woodworking machines and the principles upon which they operate. 384 pages. $3.50 per copy.

Synthetic Adhesives

By Paul I. Smith

A useful new reference book adequately describing the main types of synthetic adhesives, emphasizing their peculiar properties and main applications. It tells the works manager or foreman what adhesives will do a certain job in the quickest time consistent with maximum strength and reliability of bond under normal or even abnormal working conditions.

CONTENTS: Dry Gluefilm, Phenol-Formaldehyde Resin—Phenol-Formaldehyde Liquid and Solid Glues—Urea-Formaldehyde Glues—Cellulose Adhesives—Polyvinyl Cements—Acrylic Resin Cements—Chlorinated Rubber and Synthetic Rubber Cements—Miscellaneous Adhesives—Use of Synthetic Adhesives in the Manufacture of Aeronautical Plywood and High-Density Woods—General Application of Synthetic Adhesives in Industry. Illustrated. $3.00 per copy.

Commercial Timbers of the United States

Their Structure, Identification, Properties, and Uses

By Brown and Panshin

This book is a complete and thorough guide to the identification of commercial timbers of the U. S., and also gives information helpful to those concerned with utilization of wood. It covers in detail wood anatomy and distinguishing features of various types, gives keys for identification by gross and minute characters, and describes woods by species, with information on structure, properties and uses of each.

It contains a wide scope of precise information from most authoritative sources—anatomical studies, specific descriptions, identification keys, classified facts of structure, properties, and uses—arranged to be of most practical aid in the study of commercial timbers. 554 pages, 311 illustrations, $5.00 per copy.

Modern Wood Adhesives

By Thomas D. Perry

A new and authentic reference book on wood gluing.

The book is divided into sixteen chapters suitably illustrated and cross indexed for reference sources. The first nine chapters take up the various types of adhesives in detail giving their origin, advantages, limitations and applications. Chapters on the comparison, mixing and spreading, pressure, adhesion by heat, re-driers, impregnation and glue testing follow in that order.

After a foreword by Dr. Nelson Brown of the New York State College of Forestry, the book is divided into sixteen chapters suitably illustrated and cross indexed for reference sources. The first nine chapters take up the various types of adhesives in detail giving their origin, advantages, limitations and applications. Chapters on the comparison, mixing and spreading, pressure, adhesion by heat, redriers, impregnation and glue testing follow in that order. A glossary of terms and a bibliography at the end of each chapter rounds out this subject matter, all of which has been carefully arranged for the lay reader. Price, $3.00 per copy.

Wood Finishing and Painting Made Easy

By Ralph G. Waring

This handy manual answers every possible question on the selection and application of suitable finishes to wood and metal. From cabinet-work to bronze finishing the whole subject is covered briefly, simply, and with absolute accuracy, introducing the most recent techniques and demonstrating the use of the most modern equipment.

Chapters on Cabinet Woods and Their Accepted Finishes; Preparation of Work for Finishes; Wood Stains; Undercoaters; Fillers; Sanding; Spraying; Shop Equipment; Specifications; Methods; Metal, Toy and Fiber Finishing, and others. 228 pages, 100 illustrations, $2.75 per copy.

Principles of Woodworking

By Herman Hjorth

An entirely modern and comprehensive study of all the tools, processes, materials, projects, etc., required for a complete understanding of woodworking. Related subjects such as hardware, woods, upholstery and wood finishing are introduced by means of interesting projects. 308 pages, $2.00 per copy.

Operation of Common Woodworking Machines

By Herman Hjorth

An ideal manual for new help on the safe and efficient operation of machines used in modern woodworking. Each machine and its parts is described in the language of the beginner with step-by-step directions for using the machines. Spiral binding, 172 pages, $3.00 per copy.

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How Safe Will Your Shutdown Be?

We are rapidly approaching the vacation season when many plants will be closed down for one week to give employees their vacations and to perform many maintenance jobs that can be done only when the plant is closed.

These shutdown operations are in some respects the most hazardous you will have to deal with during the entire year. How many of you are overlooking some of these important hazards where one little mistake may spoil your record for a whole year? Perhaps this is a good time to sit back and take inventory of ourselves as safety engineers, a sort of housekeeping of our actions. Perhaps we should go to the plant engineering or maintenance department and find out what their plans are for shutdown week. Get a list of all the jobs they plan to do. Study it carefully. You may be surprised at what goes on during this one week.

Have you issued instructions to maintenance crews on safe procedures? How many electric motors are to be cleaned during shutdown week? Do electricians use carbon tetrachloride — and most do; are they aware of the hazards? Are non-sparking tools used and are provisions made for fire protection just in case?

Many more such hazards can be mentioned. The important thing is: What are you going to do about them? Are you saying to yourself, "This is shutdown week, nothing to worry about?" Yes, this is a good time to take inventory of ourselves so that those few working during shutdown week will know what the hazards are and how to perform their work in as safe a way as possible. That they know is *your responsibility.* — (Automotive Machinery Shop Safety).

New Saw Sharpener

A new table model circular saw sharpener is being introduced to the lumber and woodworking industry by P. T. Hobbs Machinery, 8375 N. Interstate Avenue, Portland, Oregon.

The new machine is specially designed for grinding rip or cut-off saws up to 20" in diameter. It's adjustable for any degree of bevel, and can be used to face off inserted point teeth in circular mills. It works equally well on fine tooth cut-off saws and skill saws.

The new grinder weighs only 60 lbs. and can be bolted to any work bench. It will sell for $64.00 F.O.B. Portland.

Kivett Brothers Incorporates

Sun, La.—Kivett Brothers, Inc., sawmill, filed articles of incorporation with the office of the secretary of state at Baton Rouge, during the week of June 25, 1949. Authorized capital stock was listed at $50,000.

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MICHIGAN NEWS

By Staff Correspondent

Schneider Bros.' Plant Destroyed by Fire

Marquette, Mich.—On June 12, fire swept through the Schneider Brothers sawmill and woodworking plant here, destroying mill and dry kiln and a large amount of logs and lumber. The firm manufactures bowling pins and lumber.

It was one of Marquette's worst fires in several years, company officials placing initial estimates of the loss at "in excess of $100,000." However, the loss will greatly exceed that figure. It was partially covered by insurance.

Destroyed were the sawmill and a a large amount of new equipment and machinery which was being installed, the dry kiln, over 400,000 feet of logs and about that amount of cut lumber. A large amount of slab wood also was burned.

Schneider's was the third large sawmill destroyed by fire in this city in the last three years. The Ajax Lumber Co. mill was burned two years ago and the Raish sawmill was destroyed last winter.

* * *

Fire Hits Woods in U. P. Area

Calumet, Mich.—During weekend of June 12, forest fires burned away more than 1,000 acres of timber and slashings in the far northern tip of Michigan. The fire was believed to be the worst in the Keweenaw area since a blaze at Lac LaBelle (Mich.) three years ago.

Blazes in the McCallum creek district between Rice and Mud lake, at Rabbit bay near the Jacobsville shore and eight miles north of Jacobsville were brought under control.

* * *

Excess of Lumber Closes Sawmill

Iron River, Mich.—An excess surplus of lumber was said to be the reason which closed the Kingston sawmill here for an indefinite period. Russel L. Kingston, manager, said the mill will be boarded up until time for reopening. The mill has been in operation since it was established 11 years ago by Henry Kingston, father of the present operator.

Contracts expired with the Heywood-Wakefield Corp. of Gardner, Mass., whose plant, the Lloyd firm at Menominee (Mich.) has been supplied with Kingston hardwood lumber. Softwood lumber is sold to other markets.

* * *

Business Outlook Better For Atlas Plywood

Newberry, Mich.—The outlook of business at the Atlas Plywood plant here is a little better company officials said recently.

This firm has taken several carload orders of tea chest stock to be shipped to North Africa. The chests are made of plywood from northern hardwoods, beech, maple and birch, using waterproof glue. Approximately 30,000 pieces for the tea chests are shipped in a carload.

The outlook in June brightened as the refrigerator companies required more boxes than in previous months. This plant is also making roller bearing boxes. In a carload, 25,500 pieces are shipped.

* * *

$250,000 Fire Sweeps Woodcraft Plant

Bay City, Mich.—A $250,000 fire swept through the Woodcraft Co. plant here recently. No one was reported injured in the fire of undetermined origin which left only a shell of the building standing.

* * *

Boss Lumber Co. Head Drowns

Ironton, Mich.—John Boss, sr., 60, owner of Boss Lumber Co. at Charlevoix (Mich.) was drowned recently when the car he was driving crashed through the steel barrier at the east end of the Ironton ferry dock and sank in the channel of Lake Charlevoix. Boss was alone in the car. Boss was widely known through west Michigan as a timber tract buyer. He owned and operated an extensive logging business.

* * *

Michigan's Neglected Trees Proving Valuable

Marquette, Mich.—Trees like aspen, "popple," and beech, scornfully passed up as not worth cutting in the lush days of American lumbering, are now being utilized by woodworking industries in this region to a big advantage.

In the region around the Great Lakes, two-fifths of the land under timber is now covered with aspen. Hitherto it has been the policy simply to let aspen stands alone, for their water conservation and other protective functions, but not to expect much of the species in the way of direct economic returns. However, a change of policy is plainly evident.

A little of the timber, about 6 per cent, can be sawed into lumber, a survey showed; 18 per cent is in the pole timber class; the rest is classified as seedlings and saplings of varying degrees of promise. A large use in paper-pulp is possible, especially if sizes considered unsuitable for high-grade pulp are permitted to be used in the production of building paper.

Beech is another special hitherto considered secondary lumber item that is now being looked at somewhat more favorably. Flooring is its principal lumber use; other uses are mostly for pieces that can be handled in short lengths, because of beech's troublesome tendency to warp in seasoning. More effective seasoning method may overcome this problem, however, and improve beechwood to a point where it could be used to a greater extent in the woodworking industry.

Owosso Mfg. Co. Under New Ownership

Benton, Ark.—A group of Arkansans have purchased the Owosso Manufacturing Company, which manufactured furniture here many years, and will increase production at the plant. The principal stockholders of Owosso's new owners are Buford Bracy, Harry Galloway, Paul M. Leird, John Collins and Louis Myers of Little Rock, Ark., and R. B. Keene of Benton.

Owosso Manufacturing Company was organized by a group from Owosso, Michigan, and at the present time, its sales territory, which is served by a fleet of six large vans to keep the finished furniture moving within a 1,000-mile radius, includes Arkansas, Texas, Louisiana, Oklahoma, Missouri, Mississippi, Southern Kansas, Alabama, and Tennessee.

Bend, Ore.—Gale Sheldon Blakley, 48, logging superintendent, died after a short illness. He had been with the Brooks-Scanlon operations for the past 37 years.

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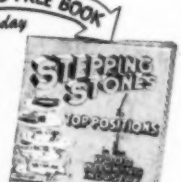

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Avoiding Log and Timber Pinching

It is always bad to have a log or a timber pinch on a saw blade while it is being cut off at any point. Such pinching is the result (assuming the saw teeth have been properly set) of the kerf partly closing after it has been partly cut, thereby imposing pinch-type friction on the blade. The kerf usually closes in this manner because the log or timber settles downward slightly and progressively by gravity at the point where it is being sawn, as the volume of wood yet to be severed is being reduced, and the amount remaining is no longer able to bear up the weight of the log or timber involved, without settling.

These things being true, the obvious remedy is to see that the log or timber is supported underneath and close to the point where the kerf is being made, at either side of the point of kerf emergence, or preferably on both sides. Toward the ends of the timber or log, the support should drop down and away from the timber or log slightly. Thus, as the kerf is gradually approaching the point of saw blade emergence, the ends of the timber or log will pull down somewhat by gravity, tending to open the kerf slightly.

In keeping with these principles, we observe that if a timber or log to be cut in two is seen to be slightly bowed, it should preferably be suported with the bowed side down, as this will have the same kerf-opening effect. On the other hand, kerf-opening tactics should not be overdone, for if the ends of a log or timber being cut in two are allowed to settle downward too far as the saw kerf nears the point of saw emergence, a split is liable to result at the kerf. The correct idea is simply to arrange for *enough* settling at the ends to make sure there will be *no* settling at the point where the kerf is being cut.

In case this point is overlooked until sawing is well under way, and pinching of the kerf on a saw has actually begun, the pinching can often be overcome on some kinds of sawing by driving wedges under the log or the timber close to the point of sawing, until it has been lifted far enough at the center to perceptibly widen the saw kerf at the top. If one forms the habit of properly placing logs and timbers for such sawing, however, the need for such wedging will be eliminated, time will be saved, and saw blades will remain in good condition for a longer period of time between fittings.

From what has been said, it can be seen that where logs or timbers are being handled and cut continually, and where they are continually brought to the same point of cutting, where a drag saw, chain saw or other sawing unit is permanently located, the foundation on which they are supported for sawing should be arranged somewhat higher at its center-length than at its ends. Log and timber trucks used in connection with sawing can incorporate this feature. Where two trains of rolls are used, with a short gap between the ends of the two trains through which the saw may pass without interference, the roll trains can readily be arranged compositely to incorporate the same feature. If logs or timbers are lifted into place with a crane for sawing, or with other handling equipment, the sawing support on which they are laid by the handling equipment can and should be made a

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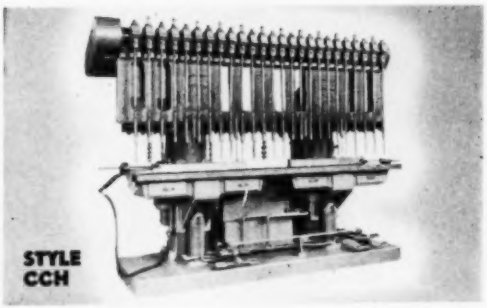

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little higher at its center-length.

In those cases where logs or timbers are being cut at sawmills, by means of large circular saws which rise from beneath and through the floor to make the cut, the condition we have been considering naturally reverses. That is, the log or timber must then be supported so the center *will* settle slightly as the cut is in progress. Settling slightly at the center where this type of machine is making the cut has the desired effect of opening the kerf slightly instead of allowing it to tend toward pinching on the saw blade.

Doctor: How's the patient this morning?

Nurse: I think he's regaining consciousness. He tried to blow the foam off his medicine.

Applying Glue to Veneer Overlays

One of the most difficult things about proper application of veneer overlays, and especially those of fretted type, is applying glue to them in such manner as to be sure they will have enough glue to hold them tightly at every point, at the same time avoiding getting enough glue on them that it will ooze out from under their edges when pressure is applied. It is a very difficult thing to clean glue away from the edges of fretted overlays, if it oozes out, so it will not show in an unsightly manner after the finish has been applied. This is more especially true if and when stain is to be applied.

One of the best ways to obtain a vedy light and yet very uniform spread of glue on veneer overlays is to have a separate surface of perfectly flat type to which glue is applied preliminarily. After getting a good uniform spread of glue on this surface, pick up an overlay to be applied to the work, and lay it flat down upon this freshly glue-spread surface. Then pick it up from this surface immediately, and apply it to the surface where it is to remain. Enough glue will adhere to the overlay to bond it fast to the surface where it is applied.

In plants having a standard glue spreader, it can be used as a valuable adjunct to this process, for the initial spread of glue on a surface can be rather precisely adjusted at the spreader, preliminarily. Therefore the transferred spread to the fretted or other overlay will be still more accurate, in proportion.

Another method that has been successfully used for applying glue to overlays is to use a block to which felt has been applied, (a blackboard eraser will do nicely) first applying a light coating of glue to the felt, and then using the block to apply the glue to the overlay with a pouncing or patting action, carefully avoiding all brush-type motion.

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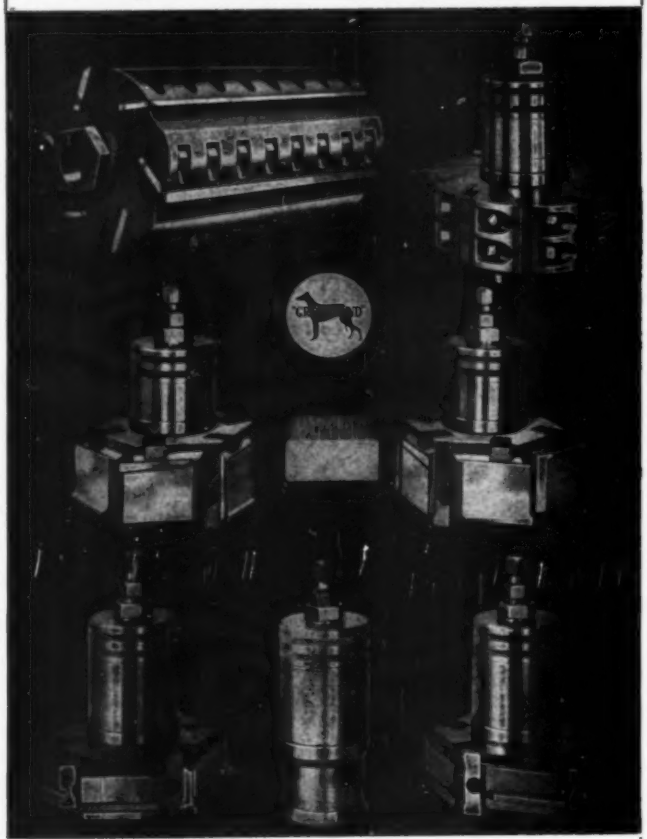

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Michigan Dedicates First Tree Farms

Washington, D. C.—Led by Governor G. Mennen Williams, public officials joined industry leaders June 10 in hailing the dedication of Michigan's first certified tree farms as the beginning of a new era in the forest history of the Wolverine state.

Governor Williams presented certificates to owners of 18 different Upper Peninsula Tree Farms representing 619,956 acres of timberland. The dedication ceremonies were held at a logging camp near the city of Munising. Michigan's newly dedicated Tree Farms range in size from a 29-acre farmer-owned woodlot to a 288,000-acre industrial forest tract operated by the Cleveland-Cliffs Iron Company, on whose properties the ceremony was held.

Snyder Plywood Head

Tacoma, Wash.—Frost Snyder, Vancouver, Wash., was named president of the Douglas Fir Plywood Association. He replaces Arnold Koutonen, Olympia.

Other officers named were F. L. Johnson, Anacortes, vice-president; Leonard Nystrom, Eugene, Ore., secretary, and J. H. Smith, Tacoma, treasurer.

Trustees of the association are R. E. Walton, Everett; J. P. Simpson, Tacoma; J. W. Forrester, Coos Bay, Ore., and Dennis M. Slenning, Tacoma.

Extraordinary Wear Shown by Wood Shingles

For the restoration of "Hampton" a late 18th Century mansion near Towson, Maryland, it is necessary to remove some White Cedar shingles which give evidence of having been in place for 160 years. Charles E. Peterson, Regional Architect, National Park Service, Richmond, Virginia, is in charge of the work.

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National Starch Products Announces Two Promotions

The promotion of S. F. (Woody) Thune to sales manager of the Mid-Western Division, National Starch Products Inc. with headquarters at Chicago has been announced by Chester A. Gage, vice president in charge of sales. "Woody" joined National in 1934 upon his graduation as chemical

S. F. Thune

F. R. Loetterle

engineer from Worcester Polytechnical Institute. For the past three years he has served as sales manager of the Pacific Coast Division at San Francisco. Prior to that time he spent a number of years as supervisor, Technical Service, for the Mid-Western Division. Thus he returns to the Mid-Western Division where he is well known to the many users of National's products.

Francis R. (Fran) Loetterle will go to San Francisco as sales manager of the Pacific Coast Division. A chemical engineer, he is a graduate of the University of Nebraska and has served in the Technical Service Department at both New York and Chicago since his graduation in 1940. During the war years he served with the army in the Chinese Burma theatre where he rose to the rank of major in the Office of Strategic Services.

Hemlock Booklet

First of a series of species pamphlets giving a quick summary of the properties and uses of West Coast woods, "West Coast Hemlock Lumber" has just been published by the West Coast Lumbermen's Association.

Illustrated and printed in two colors, the eight-page pamphlet fits a #10 envelope. It is available in quantity without charge from the West Coast Lumbermen's Association, 1410 S. W. Morrison Street, Portland 5, Oregon.

Lumber Bought On Single Bid

Eugene, Ore.—Sale of 19,000,000 board feet of timber was awarded Pope & Talbot, Inc., recently at a Willamette national forest auction when the firm entered the only bid for the 308-acre stand on Upper Willow creek, 16 miles south of Oakridge.

The sale price was $146,926, calculated from bids of $8.45 per 1000 board feet on Douglas fir; $4.65 on western red cedar; $9.15 on pine, and $2.15 on hemlock and other species.

Contour Following System

A new electronic instrument, which can follow the lines of a drawing with an electric eye and guide a machine tool to cut out metal parts according to the drawing, has been announced by General Electric's Special Products Division.

Designated as the G-E "contour following system," the new device is connected to a machine tool called a "slave unit," so that the machine's cutting tool reproduces in metal the drawing "seen" by the electric eye. As the "eye" moves along the lines of a drawing, the position of the cutting tool is changed accordingly by means of an electronic servo system, which emits signals to control the lead screws of the machine tool.

Obituary

Geo. W. Baker

Seguin, Texas—George W. Baker, who traveled for the Sheboygan Chair Company of Michigan for many years, died at his home here June 20, 1949.

Sam J. Reckford

Sam J. Reckford of New York, chairman of the board and a founder of the American Lead Pencil Company, manufacturers of Venus pencils, died June 20 in Mount Sinai Hospital, after a brief illness.

Born in New York 79 years ago, a son of Joseph Reckford, former president of the Eagle Pencil Company, and Babette Frank Reckford, he became a Columbia University student and left the university in 1887 to found with his brother, the late Louis J. Reckford, the American Lead Pencil Company. From a small beginning, the brothers built the business into one that was worldwide.

George Thompson

Garden City, L. I.—Funeral services for George Thompson, 57, a salesman for Bogert & Hopper, manufacturers of wood products at 101 W. 31st St., New York City, were held June 23. Mr. Thompson, who had been with the company for 22 years, died in his home at 32 Covert Rd., Stewart Manor.

Irwin C. Bradley

Brattleboro, Vt.—Irwin C. Bradley, who built the C. E. Bradley Corporation into one of the largest wood-turning plants in the country, died June 21 shortly after being admitted to a hospital here. He was 65 years old.

Mr. Bradley, whose brother is State Highway Commissioner F. Richard Bradley, had been inactive in the concern in recent years.

James A. Bernard

Montreal, Quebec—James A. Bernard, 66, former managing director of the Canada Flooring Company and prominent for years in the lumber industry, died June 16.

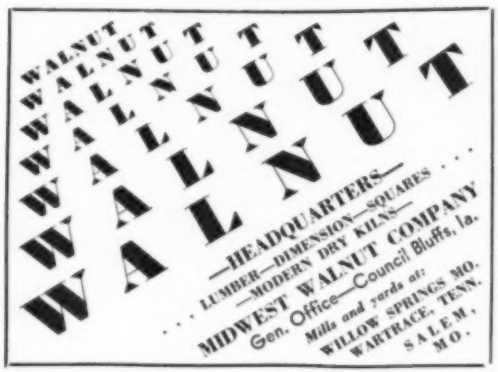
A native of Ottawa, he joined the Seaman Kent Company as manager and later became vice-president and general manager of the Mount Royal Lumber Company which was succeeded by the Canada Flooring Company.

Until his retirement three years ago he was vice-president of the Hardwood Flooring Managers' Association.

Harry F. Sullards

Little Rock, Arkansas—Harry F. Sullards, 46, vice-president and sales manager of the Arkansas Lumber Co., died of a heart attack in Beaumont, Texas, on June 7. He was in Texas on a sales trip.

Mr. Sullards left the State Revenue Department in 1944 to become associated with the lumber firm. In 1947 he was elevated to his position as vice-president and sales manager.



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MARKETS ★ FINANCIAL NEWS ★ PRICES

May Furniture Orders Off 3% From April

Since last November, the rate of furniture volume has receded each month and current production is running about 20% below that of a year ago. However, furniture manufacturers' reports for the month of May submitted for this summary indicate that the pace of the decline continues to slacken.

The decline in new orders in May was only about 3% as compared with April. However, in comparison with May of 1948, new business booked was off 20%. The unfavorable comparison with a year ago results partially from the fact that May 1948 was a recovery month for the industry.

Shipments in May were down 7% as compared with April, and 15% compared with May 1948. For the five months, shipments were off 20% in comparison with the same period in 1948. Cancellations were slightly lower in May than in April and mounted to 10% of new business booked.

At the close of May, unfilled orders were down to the equivalent of approximately 21 days production. This compares with 26 days at April 30, and nearly 55 days at May 31, 1948.

The number of employees on the industry's rolls was down 4% from the April figure and 10% from the May 1948 employment total. Dollar payrolls dropped 7% and 13%, respectively, from the April 1949 and the May 1948 figures. Although a few plants were still operating on an overtime basis, the average hours for all reporting plants fell slightly below 40 hours per week for the first time in several years, excepting for vacation months.—(Seidman & Seidman)

Lumber Movement Week Ending June 25

Lumber shipments of 427 mills reporting to the National Lumber Trade Barometer were 4.9 percent below production for the week ending June 25, 1949. In the same week new orders of these mills were 3.0 percent below production. Unfilled order files of the reporting mills amount to 29 percent of stocks. For reporting softwood mills, unfilled orders are equivalent to 20 days' production at the current rate, and gross stocks are equivalent to 65 days' production.

For the year-to-date, shipments of reporting identical mills were 2-3 percent above production; orders were 2.1 percent above production.

Compared to the average corresponding week of 1935-1939, production of reporting mills was 46.1 percent above; shipments were 47.2 percent above; orders were 50.2 percent above. Compared to the corresponding week in 1948, production of reporting mills was 2.1 percent above; shipments were 1.7 percent below, and new orders were 1.5 percent above.

Georgia-Pacific Plywood Passes Dividend

New York, N. Y.—The Georgia-Pacific Plywood and Lumber Company announced omission of the dividend on the common stock. Shareholders had received 25 cents quarterly since July, 1948. The regular quarterly dividend on the preferred, however, was voted by directors. Owen R. Cheatham, president, said the two factors which caused the directors' action was the earthquake on April 13 resulting in $200,000 damage to two of the company's plywood plants and one lumber plant at Olympia, Wash., and a decline of more than 30 per cent in plywood prices between November and June. The combination resulted in an approximate "break-even" basis for second-quarter operations, he said.

Southern Hardwoods in Small Production Loss

The week ending June 18 showed a production of 5,499,000 feet of southern hardwood, by 71 units, compared with a cut of 5,808,000 feet by 70 units the week before, the National Lumber Trade Barometer reveals. In that week shipments reached 4,970,000 feet, compared with the 5,155,000 feet shipped the week before and new business dropped off to 4,013,000 feet from the 4,510,000 feet accepted the week before.

Canadian Exports Off

Canada exported 421,382,000 board feet of lumber during the first quarter of 1949, a decrease of 31 per cent from the same period of 1948, according to the U. S. Department of Commerce.

Ga.-Pacific Omit Dividend

Georgia-Pacific Plywod & Lumber Co. directors omitted the dividend on the common. The company had been paying 25 cents quarterly on these shares since July 1948. The directors declared the regular quarterly dividend on the preferred.

Public Building Higher, Private Contracts Off to May

F. W. Dodge Corporation reports that by the end of May the dollar valuation of contracts awarded this year in the thirty-seven states east of the Rocky Mountains for building and construction by public agencies was running at a level 19 per cent higher than in the corresponding five months of last year while private contracts were done 20 per cent in the period.

Public-account work of all descriptions in the eastern states had a contract valuation in the January-May period of $1,380,812,000 against $1,160,560,000 in the corresponding five months of last year. Private-account work contracts declined from $2,671,047,000 to $2,141,188,000 in the same period.

Wood Match Consumption Drops 20%

Oswego, N. Y.—Extension of rural electrification and a preference by the public for mechanical lighters was listed by the local manager of the Diamond Match Co. as reasons for ten-week shutdown of its plant here.

Plant Manager William J. Elder announced that the company's "woodstick" match plant, which employs about 235, closed June 27th for a ten-week period. Chemical department operations at the plant were placed on a standby basis several weeks ago.

The company, Elder said, has been carrying on an inventory in excess of six months' supply of wood matches.

Wood match consumption, he continued, has dropped during the last year 20 per cent below the prewar level.

Wood Products Co. Seeks Legal Extension of Credit

Utica, N. Y.—Claiming inability to meet debts as they fall due, the Carthage Wood Products Company, Carthage, petitions for time to pay them in full, according to a bankruptcy plan filed in Federal court here.

Liabilities are $25,613, with assets estimated at $34,141, of which $10,000 is represented in real estate, accounts $9,806 and merchandise $5,554.

Woodcraft Plant Burns

The Woodcraft Corp., Bay City, Michigan, went back into operation June 16, less than one week after a spectacular $250,000 fire destroyed the firm's finishing and shipping rooms. Production was resumed speedily after the firm entered negotiations with the Reconstruction Finance Company to rent a portion of a former Bay City ship building plant for use in the finishing process.

The blaze started early in the morning of June 12 when an explosion ripped through the spray room. Only the watchman was in the plant at the time and he was not injured. His action in slamming shut two fire doors was credited with confining the blaze to the finishing and shipping departments. Firemen fought the lacquer and varnish-fed flames for nearly five hours.

Woodcraft produces radio and television cabinets and finished wood products. Nearly 3,000 completed television cabinets were destroyed in the inferno. An order for 11,000 cabinets was sublet, despite the firm's return to production.

Sawmill Fire Loss $40,000

Bath, N. Y.—Fire recently leveled a large sawmill at Kanona with damage estimated at $40,000. The mill is owned by Stanley Barkley. Destruction of heavy pieces of machinery accounted for a large part of the loss.

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New Issue of "Moore Facts" Is Now Available to Trade

"Moore Facts" published by the Moore Dry Kiln Co., of Jacksonville, Fla., has just gone into the mails and if you have not received a copy you are invited to send for one. The latest issue gives a number of helpful tips to dry kiln operators, and in addition to featuring many of the products which Moore supplies to the trade, includes a most helpful chart.

This two-page chart is a combined relative humidity and equilibrium moisture content chart which shows values for a given dry bulb temperature and wet bulb depression, a very handy guide for kiln operators. A considerable amount of material is also devoted to lumber handling, and views of Moore equipment are shown in various locations in this country and Canada.

Arkansas Firm Anounces New Product

St. Joe, Ark.—North Arkansas Wood Products, announced May 29, 1949, the showing of their Lawnette, which is a 100% Arkansas product, designed and manufactured in their modern plant in St. Joe, by various dealers throughout the state. The Lawnette which has seating capacity of 10, is heavily constructed from kiln dried oak.

Fire Levels Planing Mill

Salem, Ore.—The Atlas Lumber company planing mill at Falls City, 25 miles southwest of here, fell to flames recently.

Walter R. Schitke, Dallas, one of the owners, estimated damage at $30,000. Schmitke blamed the blaze on sparks from a nearby trash fire. Three buildings were levelled and $10,000 worth of piled lumber destroyed.

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Unique Mfg. Co. Produces Church Furniture

Muskogee, Okla.—The Oklahoma Industrial News, published by Oklahoma Planning and Resources Board, said in its June, 1949 edition: "New Muskogee Company Builds Church Furniture to Serve Extensive Area.

"Since the first week in May the Unique Manufacturing Company, Muskogee's latest industrial enterprise, has been engaged in the production of church furniture.

"The new company will do business throughout Oklahoma and in parts of New Mexico, Kansas, Arkansas and, possibly, north Texas, A. E. Keeler, manager announced. A complete line of church furniture will be offered, including pews—in several different patterns, rostrum chairs, pulpits, communion rails and front screens.

"Sturdy Oklahoma oak logs are used exclusively in making the furniture. Plans are being formulated for the erection of a mill near the plant and a large kiln for seasoning the timber. Within a short time Keeler expects to have at least 60,000 feet of Oklahoma oak drying at all times.

"As a sideline the Unique firm will turn out desk name plates. Later on, as the company expands, it will get into the custom manufacture of solid oak bedroom suites of the 'Wagon Wheel' variety, built to exact specifications.

"Keeler's plant is reported to be one of only two in the state specializing in the manufacture of church furniture. The other plant, located in Holdenville, began operations several months ago."

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Fire Sweeps Frank Palmer Furniture Plant

Apalachin, N.Y.—Fire on June 8th swept the lumber yard and furniture manufacturing plant of the Frank Palmer and Sons Company, Inc. George Palmer, plant executive, estimated damage at $100,000.

Mr. Palmer said the blaze apparently started in a kiln drying room. A new building, valued at $50,000, was completely destroyed and another large building partially burned. The office building was left intact. The plant employed 100 persons when in full production.

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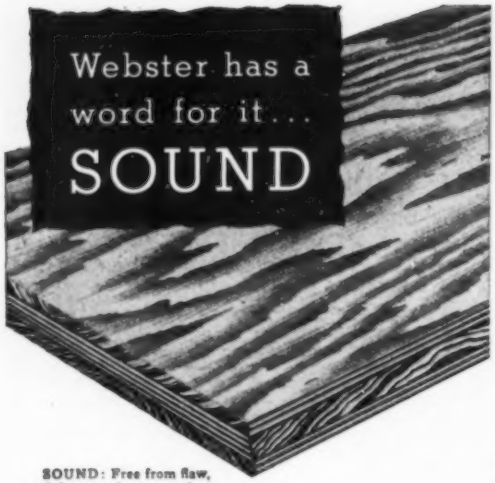

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